THE LANCET.

LECTURES

ON THE

ANATOMY, PHYSIOLOGY, AND DISEASES

OF THE EYE,

By MR. LAWRENCE.

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Lecture XXIX.

Cataract—continued.

Gentlemen,

One of the unfavourable circumstances which takes place after the operation of extraction is, a prolapsus of the iris. (Mr L. then repeated some observations which he made at the close of the last lecture on that accident, and proceeded to observe.) If it should be found that in ten or twelve days after the operation a partial prolapsus of the iris should exist, and if there be no irritation or inflammation about the eye, the prolapsus may be touched with the nitrate of silver, scraped to a fine point; it makes the protruded portion shrink, and excites inflammation, which produces adhesion between it and the corneal aperture. It has been recommended to puncture the protruded portion of the iris with a cataract needle, and let out the aqueous humour to diminish the pressure and tension upon the iris, and this is decidedly advantageous in the early stage of the prolapsus; but, when that proceeding has been found insufficient, the application of the caustic pencil will be the most advantageous treatment, and it may be necessary to repeat it once or twice. If, however, any inflammation should exist in the eye at the same time as the prolapsus, it must be removed by the application of a few leeches, and other measures: the soothing treatment, with the puncture of the prolapsed portion, is sufficient in the great majority of instances. You must proceed cautiously in the use of caustics, which is very seldom necessary or advantageous.

The operation of extraction is particularly applicable to cases of firm cataract, especially in persons advancing in years. The advantages of the operation are, that the cataract being hard and incapable of absorption is removed from the eye, and the sight thereby effectually restored; the flap of the cornea is often healed in forty-eight hours after the operation, and the sight is then restored, but you are aware it is not prudent to employ the eye at that time. The great advantages of the operation appear to be, the complete mode in which the cataract is got rid of, the short time in which the sight is restored.

There are, however, under certain circumstances, objections to the employment of extraction, whether for hard or any other cataracts. A small anterior chamber increases the difficulty of the operation; it is not easy to make an adequate section of the cornea without wounding the iris. The cataract is sometimes so large as to push forwards the iris, so that a very small space is left between the latter and the cornea; but, as I have before observed, the firm cataract is generally smaller than natural, therefore this objection does not apply to a case of hard cataract. A very sunken eye is unfavourable for the operation of extraction; and the eye may be in this state either from an absorption of the adipose matter in the orbit, or from a great projection of the brow: the globe cannot be denuded sufficiently for the easy execution of the operation, or at least not without subjecting it to pressure. A very advanced age I consider to be unfavourable for the performance of extraction; the restorative powers of the system are enfeebled, and the union of the cornea does not readily take place. I have seen some cases, in which no progress towards union was observable four or five days after the

section had been made. It would be difficult, however, to specify any exact age at which we might deem it objectionable to perform the operation; we should rather consider the general powers of the individual, for some persons are as young at seventy as others are at sixty. Another objection to the operation of extraction has reference rather to the operation than to the patient; it is the difficulty of performing it, the degree of manual dexterity required for its successful execution: unless a person has frequent opportunities of operating, he will not become familiarised to the various difficulties of the proceeding, nor acquire that confidence which is essential to success. The unsteadiness of the eye, the little control which the patient has over it, the alarm which the dread of the operation, and still more the preliminary measures occasion, and the convulsive or spasmodic exertion which the actual contact of the instrument often excites, are circumstances of real difficulty. The eye is rolling incessantly from one side to the other, and it immediately turns away from the instrument, so that the greatest care and caution are necessary even to perform the section of the cornea. Undoubtedly the operation of extraction must be deemed one of considerable difficulty, and unless it has been frequently performed on the dead eye, the expectation of success on the living subject would be as absurd, as the attempt would be unjustifiable. The operation of depression is, on the other hand, very easy, so that it requires no particular practice before hand.

Depression.

In all instances, before operating with the needle, it is expedient to dilate the pupil by belladonna: this enlargement of the aperture gives you an opportunity of seeing exactly what you are doing. You ought also to continue the employment of belladonna for some time after the operation, to keep the pupil permanently dilated, and thus to allow free access of the aqueous humour to the lens, as well as to prevent adhesions of the pupillary margin. Various needles have been used for depression; the spear-shaped needle, which has been very commonly employed, is made straight, and terminates at the end in a spear point. The needle employed by the late Mr. Saunders is straight also, but instead of being spear-pointed is ground flat at the extremity: it is just such an instrument as might be made by grinding a knitting needle flat at its end, and giving it a sharp point: the sides of the end are also sharp. The needle of Scarpa is slightly curved at the end, and is sharp upon the edges of the curve. (The needles were shown to the pupils.) There is a needle strongly recommended by the late Mr. Hey, but it is now out of use; it is the worst of all I have tried.

The situation of the patient, and of the operator; the elevation of the upper lid, and the mode of fixing it by the assistant; and the relative situation of the parties, are to be the same as I described for extraction.

The needle is to be entered, at the distance of a line and a half or two lines behind the margin of the cornea, through the sclerotic coat, and nearly, but not exactly, in the middle of the eye, because the long ciliary artery runs on each side along the middle, and therefore the needle should be entered a little above or below. It is to be introduced on the temporal side of the globe, and then carried forwards and upwards, so as to place it on the upper and front part of the lens, and then the business of depression begins. You steadily press upon the cataract, and move it downwards and backwards, out of the axis of vision; and this is to be done, not by any sudden motion, but by a slow and gentle pressure, until you press the lens below the pupil; you hold the needle on the lens for a short time to fix it steadily in that position, and then lift up the needle a little to see if the lens rise; if it do not, you withdraw the needle from the eye; if the lens should rise again, you depress it, and keep it steadily depressed for a short time, after which you withdraw the needle. There is a method of performing this operation termed *reclination*, in which the lens is not pushed downwards in a straight direction, but is turned on its axis, so as to be placed horizontally in the vitreous humour, behind the lower part of the iris. When this kind of displacement has been effected, the posterior surface of the lens is turned downwards, the anterior upwards; the superior margin is backwards, the inferior forwards. In order to operate in that way, a particular instrument has been devised by the German surgeon who proposed the operation; it consists of two needles, which, when closed together appear and may be used as a single needle. It is employed in this state to puncture the sclerotica, but when the instrument has entered the eye, the operator separates the two component parts, and then there are apparently two needles, which are placed in front of the lens, and so turned as to *recline* it, or place it in the situation already described. The reclination may be accomplished with the com-

mon simple needle, but the lens is apt to revolve under the needle instead of taking the desired direction. It is an operation which has not been much performed in this country.

The operation of depression as performed by Scarpa is nearly the same as that which I first described; his needle is to be introduced with its convexity forwards, the point of the needle is then carried in front of the upper part of the lens, when it is to be depressed, pushing the lens downwards and backwards into the eye; having done this Scarpa turns the needle, and carries it quite through the front of the capsule into the anterior chamber, and makes a point of lacerating the capsule very freely, so as to let in the aqueous humour upon the depressed lens; and he advises the removal of any soft or loose fragment of the cataract into the anterior chamber. Such are the different modes of performing the operation of depression.

You will perceive that in this operation there is a punctured wound through all the coats of the eye, through the conjunctiva, the sclerotic, the choroid and retina, and a forcible displacement of the lens; the cells of the vitreous humour are lacerated, the capsule of the lens is lacerated, so that there is an extensive injury of the internal structure of the organ. Although the operation at first sight appears to be simple, it cannot be unattended with the risk of inflammation, and in fact inflammation is just as common after this operation as after extraction; and you must recollect too, that when inflammation does occur, it is set up in the most internal part of the organ, generally of a severe kind, and therefore the patient requires just as much care after depression as extraction. It will be necessary to pay the strictest attention to the state of the patient's health previously to the operation, and the treatment for the removal or prevention of inflammation must be equally active. Internal inflammation commencing in the iris, arising slowly and exhibiting itself gradually, is a common occurrence after depression; it must be treated actively by antiphlogistic measures, and afterwards by the use of mercury.

There is a further danger in depression, which is that of an affection of the retina, arising from the pressure of the lens on that structure when the lens is pushed lower down in the eye; and therefore it is necessary to be on your guard not to push the lens too far down; you have only a small space to move the needle in, and you must be very careful not to depress the lens further than is absolutely necessary to get it below the pupil. The pressure of the opaque lens on the retina is of itself sufficient to produce amaurosis.

At the time when there was a great controversy between the advocates of extraction and depression, among the disadvantages of depression was enumerated the subsequent rising or elevation of the lens, and that was considered a formidable objection to depression. This, however, does not form any great objection to the operation; for if such a circumstance should happen, which is seldom the case, the operation may be repeated. Depression is an operation which admits of repetition; in extraction, on the contrary, the fate of the eye depends on one effort; if that fails, there is no further chance. The operation with the needle may be performed many times, and the eye will bear it without any serious injury, so that you may ultimately accomplish that which you failed to effect in the first instance. The subsequent rising or reappearance of the cataract at a distance of time from the operation, is not to be feared. The old idea that the lens when pushed out of the axis of vision, remained unchanged in its new position, is quite incorrect. It undergoes absorption; this process will require a longer or shorter time in proportion to the softness or firmness of the lens. Two or three years are sufficient for the perfect absorption of the lens, if it be hard; so that the idea of the lens rising at a remote period, is not to be supported. Scarpa mentions that he had an opportunity of examining the eye of a patient after death, on which he had operated about three years before; and he states that he found a portion of the lens then remaining in the vitreous humour, equal in size to a pin's head.

The cases to which the operation of depression is best suited, are those hard cataracts in which, for some of the reasons before mentioned, the extraction might not be advisable, or when the operator does not feel sufficient confidence in himself to perform the operation of extraction. The advantages of depression are, the facility with which the opetion may be executed, and the less degree of risk to the organ which attends it; the operation may also be repeated; if you do not succeed at one time, you may at another, so that there are many cases in which depression may be preferable to extraction.

Operation by solution or absorption.

The third mode of operating for cataract, by solution, remains to be considered. It was found by casual observation,

that under many circumstances, where the operation of depression was attempted, the cataract was not depressed, and yet on leaving the eye quiet for a certain time, the cataract disappeared. Mr. Pott and Mr. Hey were great advocates for depression; and they found, when attempting to operate on soft cataracts, that the needle passed through them; and they observed in these cases, in which the operation was supposed to have failed, that after a time the pupil became clear; this of course showed that a process of absorption went on after the capsule was lacerated, and the aqueous humour admitted to the lens. Hence arose the idea of operating designedly in this manner, viz. to disturb or break the lens, and perhaps to lacerate its capsule, and then leave it for absorption. This mode was afterwards called the operation of solution; it might, perhaps, be more correctly called that of absorption. The lens is neither depressed nor extracted, but placed under such circumstances, that it disappears from the eye, being either dissolved in the aqueous humour, or taken up directly by the absorbents; it is a very useful operation, and easy of performance. The mode of proceeding is to introduce the needle in the same situation as for depression. We generally use a needle which cuts a little further on the sides than that of Mr. Saunders; the only difference between that and the former being the addition of a cutting edge of about one-fourth of an inch from the point The object is to divide the anterior layer of the crystalline capsule. If the cataract be fluid, its contents will pass into the anterior chamber, and render the aqueous humour turbid; but if it should be only soft, not fluid, you move the needle gently once or twice through it, after you have freely lacerated the capsule, and then withdraw the instrument. All you have to do is to lacerate freely the anterior capsule, without disturbing the natural situation of the lens. This operation may be followed by inflammation, just as any other punctured wound of the globe; but if you proceed carefully, and are contented to do little at a time, it does not excite much inflammation. The absorption of the lens goes on to a certain extent; you will find, probably, that some of its exterior soft substance will pass through the opening in the capsule into the anterior chamber, and then be completely absorbed. After a lapse of some weeks, you may operate again, if any portion of the opaque lens should remain, and you then lacerate the capsule more extensively, break up the lens into fragments, and carry them into the anterior chamber, where absorption will go on rapidly, so that you have at last the pupil completely clear. You may repeat the operation in this way two or three times, if necessary. In many of these cases, in which the greater part of the lens is soft, the nucleus remains firm, and the size of this firmer nucleus will very much influence the time required for the absorption of it.

The points to be attended to in this operation are, *first*, not to displace the lens in the first operation; for if you do, it will bulge against the iris, press upon and irritate that part, and thus occasion great mischief; do not attempt too much at once, but rather repeat the operation when the lens has been diminished by absorption, and then you may make a free division of the capsule, and move the needle about more freely in the lens.

This mode of operating is slow, and will require several weeks or months before sight is restored. The cases particularly fit for it are fluid and soft cataracts; all you have to do is to lacerate the capsule, and let in the aqueous humour upon the cataract. It is also applicable to caseous cataracts; and even those of firmer consistence; but in the latter, much more time is required for absorption, as you might naturally expect. The time required for absorption is uncertain; the less inflammation is excited, the more rapidly does the process go on. The removal even of a soft or caseous lens is often long and tedious; and this circumstance forms a real objection to the operation. Patients are very anxious to get sight restored, and the surgeon is equally desirous of accomplishing the point. Delay is, however, unavoidable, in this method of proceeding, in which weeks, and even months, sometimes elapse before the cure is finished. The only compensation to the patient for the extension of time, is the less risk of inflammation.

The operation by solution or absorption, has been sometimes performed by introducing the needle through the cornea, and lacerating the capsule of the lens; this is called *keratonyxis*: it was first practised by a German surgeon, named Conradi, and introduced into practice in this country by Mr. Saunders, who, I believe, did not know that it had been already practised by Conradi. It is an essential circumstance in the performance of keratonyxis, that the pupil should be fully dilated by belladonna; we carry the straight needle of Mr. Saunders through the cornea and pupil, and lacerate the anterior capsule, but, when we introduce the needle behind the

iris, we can act upon the lens and capsule much more freely. We must proceed cautiously in the *anterior operation*, as keratonyxis is also called, because the aqueous humour escapes by the puncture in the cornea, and the iris and lens are pushed forwards. It has been proposed to depress the lens, by introducing the needle through the cornea, and to cut it up into fragments, and this has been performed in the way of keratonyxis; but there is much less power of using the needle upon the lens, when introduced through the cornea and pupil, than when it is entered behind the iris. It is more expedient, therefore, to confine the anterior operation simply to the laceration of the capsule, and the consequent admission of the aqueous humour to the substance of the lens, and to complete the operation subsequently, by introducing the needle behind the iris.

With regard to the *operation* for *cataract* in *infants*, for whom this operation is peculiarly applicable, the same general principles must be observed as with adults. The cataracts of infants are always soft, and it generally happens that the capsule is opaque, as well as the lens; indeed we find generally that the lens is partially absorbed, and that the capsule has a white shining shrivelled appearance. Such cases of cataract are only to be operated on with the needle; depression or extraction is never to be thought of in infants. The great difficulty is in fixing the head, and denuding the eye, so as to get a clear view of the organ; the fissure of the lids is small, and therefore it is difficult to expose the organ fairly. We use the straight needle with cutting edges for this purpose, our object being to lacerate the capsule, to break up the lens into fragments, and to introduce these fragments into the anterior chamber, that they may there undergo absorption.

I may observe to you generally, that absorption goes on much more quickly in the anterior, than in the posterior chamber. If the fragment of lens be not too large, if it do not produce any inflamnation, then absorption will go on fast. It disappears from the anterior chamber in a third part of the time, which would have been necessary for its removal from the posterior. But you must take care that the portions of lens placed in the anterior chamber do not excite inflammation, or rather take care that they are not of sufficient size to do so. I have sometimes known it necessary in the adult, especially when the lenticular ragment has been firm, to make an pening in the cornea to let it out.

The child must be placed in the recumbent position, with the head upon a pillow; and as we can seldom succeed in opening the lids sufficiently with the fingers, it will be best to use the elevator of Pellier, and fix by it the upper lid against the orbit. The operation may be performed either behind the iris or by keratonyxis. If you choose the latter method, you introduce the needle through the cornea near to the iris, carry it on parallel to the iris, and rupture the capsule; but, if you employ the posterior operation, then you lacerate the capsule, break up the lens, and push the fragments into the anterior chamber. In operating on the right eye, you place yourself behind the child's head, and elevate the lid with the fore-finger of the left hand, or with the elevator of Pellier; and whilst an assistant depresses the lower lid with the right hand you introduce the needle. In operating on the left eye, you place yourself in front instead of behind the child; you let an assistant elevate the upper lid with Pellier's instrument, and depress the lower lid with the fore-finger of the left hand, and use the needle with your right: or you may sit behind the patient, and operate with your left hand. The principal circumstance to be attended to, in using the elevator, is to lift up the lid, and secure it against the edge of the orbit, without making pressure on the globe of the eye; you must keep the globe as free from pressure as you possibly can, especially if you perform the operation of keratonyxis. It is generally necessary to operate twice; and a third operation may be required. The first operation is to cause the absorption of the lens, and the next thing you have to get rid of, is the opaque capsule; the mode of treating the latter, is the same in the infant as in the adult; all you have to do, is to carry the needle in front of it, having introduced it behind the iris, and detach it from its surrounding connexion for about 3-4ths, or 4-5ths of its circumference, so as to separate it completely, to that extent, from the ciliary body. When thus detached, it rises up after the needle is removed, and seems to fill the pupil as before; but it shrinks, when no longer connected at its circumference, and is gradually withdrawn behind the lower edge of the pupil. You might, however, only make a straight incision through the opaque capsule; the divided portions retract and separate, so as to leave ultimately a sufficient pupillary aperture. This is the mode of proceeding in the second operation. Until you have performed the operation, you can hardly

have any idea of the toughness and strength of the capsule; for although a perfectly delicate and transparent membrane in the natural state, it shows how inflammation can alter the texture of parts.

It has been asked, at what time should an infant born with cataract be operated on? At what time after birth is it safe to perform operation? How long ought we to defer it? These are important questions for consideration. Heretofore it was considered proper to defer the operation in cases of congenital blindness, until the patient had grown up to the age of fifteen or sixteen; until he had reached an age at which he could judge of the importance and necessity of the operation, and exercise some degree of self-constraint. That, however, is almost an impossibility; for when patients are born blind, they acquire an oscillatory motion of the globe; the eyes are incessantly undulating from side to side, and are not at rest for a moment. The reason of this is that the eye, having no objects on which to fix, is moved from one direction to the other by the muscles, which appear to act equally; thus there is no inducement to direct the eye steadily in any quarter, and consequently the power of fixing it is never acquired. Now, if you defer the operation for a long time after birth, this unsteady motion of the eye becomes quite confirmed; you may succeed in giving sight to the patient, but he cannot acquire the power of fixing the eye upon objects. A girl, fourteen years of age, came to this Infirmary to be operated on for congenital cataract, and although the operation succeeded perfectly well, although the pupils were as clear and black as if she had been born with perfect eyes, yet she did not acquire the power of fixing the eyes whilst she remained at the Infirmary, and consequently vision was of little use to her. I was desirous that she should come back in a few months, in order that we might see if any improvement had taken place, but when she returned her eyes continued to roll about as before. This then is a great argument in favour of early operation. I have operated on children six weeks of age, and with perfect success; perhaps it is not worth while to operate earlier than six weeks or two months, and generally speaking, the risk of exciting inflammation is very little. Inflammation does not arise readily in children, unless there is something decidedly wrong in the manner of operating. For the performance of the operation at this early age we are indebted to the late Mr. Saunders.

Secondary cataracts are such opacities of the capsule as appear after the removal of the lens, either by depression or extraction; or you may have a portion of opaque lens remaining in the pupil after either of those operations. Such lenticular fragments will be removed by absorption. As to the opaque capsule, which may remain, or which may form subsequently to operations for cataract, it must be treated in the way already described. Secondary cataract may also be formed in consequence of the effusion of lymph during the inflammatory condition of the iris, and its subsequent organization into an adventitious membrane. This may be remedied by the operation for artificial pupil hereafter to be described, or by the method before mentioned for operating on capsular cataract.

The description which I have given you of the various operations for cataract will enable you to understand the general course of proceeding; but it is impossible to lay down rules applicable to every case; there must always be some demand made on the judgment and ingenuity of the operator.

LECTURES

ON THE

THEORY AND PRACTICE OF PHYSIC,

BY DR. CLUTTERBUCK.

Theatre, General Dispensary, Aldersgate-street.

LECTURE XL.

Of Asthma.

Gentlemen,

I HAVE deferred the consideration of *asthma* till the present period, because it is a disease that cannot be understood without referring to most of the preceding affections of the organs of respiration. It is a subject involved in much obscurity, if we may judge from the various and contradictory opinions that have been entertained with regard to it.

The term *asthma* is vulgarly applied to almost every case of difficult breathing, however different its immediate cause may be. But for a long time past, physicians have limited the term to that kind of difficult breathing that recurs periodically, often at pretty regular intervals, and

which has been called accordingly, *periodical asthma*, and sometimes, (though not always justly) *spasmodic* or *convulsive asthma*.

There appear to be two species or varieties of *periodical asthma*; the one *catarrhal* chiefly, though it may also be combined with *spasm* in the muscles of inspiration: the other simply *spasmodic*, and to which alone the term *spasmodic asthma* applies. These are so different in many of their symptoms, as well as in their treatment, as to require separate consideration.

The first variety, or the *catarrhal* species of *asthma*, is marked by slow and laborious breathing, accompanied with a wheezing sound. There is a sense of heat and constriction in the chest. Both inspiration and expiration are slow and laborious, the patient making great efforts to get air into the lungs, and to expel it again; and in doing this he calls to his aid many muscles that are not ordinarily employed in inspiration, but which have some power to elevate the ribs, and thus to expand the chest.

The pulse is generally small and feeble, and sometimes unequal or intermittent; the nails, lips, and some other parts of the body, are of a livid hue, in consequence of the blood not being properly changed in the lungs. Such blood does not sufficiently stimulate the heart and arteries; in consequence of which, the circulation is carried on imperfectly, and the animal heat is diminished, as observed more particularly in the extremities. In like manner, the brain becomes incapable of carrying on its functions properly, and stupor and sometimes delirium, take place.

The continuance of the paroxysm is very uncertain; it may last for half an hour only, or it may continue for several hours. There is little or no cough at first; but towards the decline of the paroxysm, cough and expectoration both make their appearance, and the breathing becomes easy in proportion as the expectoration is copious.

The other species or variety of *periodical asthma* is the *dry asthma*, so called from being unattended with expectoration in any of its stages. The attack of this form of the disease is often very sudden; it continues for an uncertain period; and often terminates as suddenly as it makes its attack. This is not the case with the former or *catarrhal* species, both the accession and decline of which are more slow and gradual.

There is, in the *dry asthma*, a sense of great constriction at the margin of the chest, as if a cord were drawn tight around the body. The breathing is short, and without either cough or wheezing. It is often attended with pain at the back part of the head; and it frequently makes its attack at night. In some instances there is, as it were, a combination of the two varieties mentioned, more or less of catarrh being mixed with the other symptoms.

The recurrence of the paroxysms, in both species of asthma, is very uncertain. It may be daily, or oftener; or at much longer intervals, without any regularity; though sometimes the returns are pretty regular. In general, in the *catarrhal* species, the paroxysms recur towards evening, for several days in succession; then gradually decline; after which, there is often a long interval before the paroxysms again appear. But, even in the intervals, the breathing is more or less difficult: the patient being obliged to labour much in order to elevate the ribs; to assist in which act, he raises the shoulders; till, from long habit, they become fixed in this position; so that an asthmatic subject may be recognised in general by the elevation of his shoulders, in his ordinary gait.

Asthma does not occur, I believe, in infants; but I have seen it as early as eight or ten years of age. It seldom makes its appearance for the first time in old subjects, though it may continue from an earlier period, through life. After continuing for several years, with perhaps great severity, it not unfrequently gradually subsides and disappears, and that even spontaneously. It is one of the diseases, that claim to be considered as hereditary.

However severe the paroxysms of asthma may be, (and they are such at times as seemingly to threaten instant suffocation,) they seldom prove immediately fatal; though they often do so by laying a foundation for other fatal diseases. Now and then asthma terminates in pulmonary consumption—this, however, is a rare occurrence; the state of the system being very different in the two cases. Not unfrequently, asthma terminates in hydrothorax, or in general dropsy, and thus proves fatal: sometimes it induces apoplexy. The continued, or at least, the frequent impediment, given to the transmission of blood through the lungs, during the paroxysms of asthma, proves a source of irritation to the heart, which lays the foundation for disease in this organ; giving rise, thus, to a morbid enlargement of the heart, or an aneurismal state of the large vessels.

The remote and existing causes of asthma, are various. Frequently it owes its origin to repeated and neglected ca-

tarrh. A variety of irritating matters inhaled in breathing, may also be reckoned among the exciting causes of the disease. The disposition to it is often hereditary, as I before observed. Deformity of the chest appears also to predispose to it. When the pre-disposition is very strong, as appears to be the case when the disease becomes habitual, a variety of indirect and trivial causes are sufficient to excite the paroxysm—as a disordered state of stomach; violent exercise; and even mental emotions, are sufficient to induce it. Some asthmatics are better in the country—some in towns; some in elevated, and others in low situations. These differences are only learned by experience in the individual cases. It is also much influenced by season, and weather—the disease is frequent at the variable season of the year; and likewise in very hot weather.

Theory of Asthma. Various opinions have been entertained, with regard to the nature of asthma, or the exact state of organs, out of which the symptoms arise. It may be worth while, perhaps, to notice the contradictory opinions that have been entertained on the subject; as, by showing what is not true, we may the sooner arrive at a just conclusion: and here, as in all other cases, a good theory will materially assist us in the cure. If it does not enable us to treat all cases with success, it, at least, directs us to the proper use of remedies, and prevents our employing them at random; with, perhaps, injury, instead of benefit.

Much of the obscurity and contradiction in opinion that exist upon the subject, are doubtless to be attributed to want of discrimination; the different species of the disease having been confounded together. By some the disease has been ascribed to a *spasmodic* contraction of the bronchial tubes, or of the air-cells of the lungs: and Dr. Cullen appears to have been of this opinion. It is a sufficient answer to this, however, that these tubes are not muscular in structure, and are, therefore, not liable to spasm. Provision, indeed, is made in the construction of the trachea, to guard against contraction. A great part of the tube, and of its ramifications, is cartilaginous, and consequently not contractile; and though, at length, in the minuter divisions of the tube, nothing absolutely cartilaginous is to be found, yet the disappearance of the cartilage is gradual, till it becomes, as it were, a ligamentous substance—never presenting any thing muscular, in appearance. Indeed, were the smaller branches of the bronchia endowed with muscular power, life would be continually endangered, by the inhalation of any thing of an acrid nature, sufficient to excite contraction: whereas, when pungent vapours are inspired, it is at the glottis only that contraction takes place, for the purpose of intercepting them.

The most popular modern work on the subject of asthma, is full of unfounded hypotheses, with regard to the intrinsic nature, or proximate cause, of the disease. Thus the paroxysm is said to depend upon effusion of serum into the cells of the bronchia; and that convulsive motions of the respiratory muscles take place, in order to get rid of it; that this effusion is carried off, partly by absorption, partly by exhalation, and also by the aid of cough and expectoration. It is supposed that this serum is thrown out by the exhalents into the cells of the bronchia, and not by mucous glandules, as in the extreme branches of the trachea. The capillary vessels being passive, or affected with torpor, instead of exhaling a thin vapour, they permit lymph to pass, without contracting so narrowly as to detain the grosser parts of the current. The increased action of the respiratory muscles is of a convulsive kind, it is said, made in order to get rid of the effused fluid. The want of cough in the beginning, is thus explained:—The vesicles are less irritable, than other parts; they do not collapse, because their cavities are filled with lymph; but when partially emptied, by absorption and exhalation, the elasticity is restored; and then the mucus begins to be expectorated. In another part it is stated, that the vesiculæ are occupied by lymph; the bronchia are straitened by the same matter in a more viscid state; the diaphragm cannot descend, on account of the resistance of the stomach distended with flatus; and the trachea is probably narrowed by the pressure of the œsophagus, affected like the stomach.

Now there is a string of hypotheses here, none of which rest on any sufficient proof. 1. Effusion of serum in the bronchia; 2d, the removal of this, partly by absorption, partly by exhalation; 3d, that this serum is thrown out by the exhalents, and not by mucous glands; 4th, that the capillary vessels are in a state of *torpor*, or in a passive state, permitting the thicker parts of the blood to escape; 5th, that the increased action of muscles is convulsive; 6th, that the elasticity of the cells of the bronchia cannot expel the effused serum, till partly emptied; 7th, that the bronchia are straitened by the same matter in a more viscid state; and 8th, that the diaphragm cannot descend,

on account of the distention of the stomach by flatus.

All these, are mere assumptions, and which, if they really existed, would not account for the symptoms. If the cells were so full of serum as here supposed; and still more if the bronchia were straitened by the same matter in a still more viscid state; the air could not act at all upon the blood, and the patient must be suffocated. It would be just the same as filling the trachea with water; it would, in effect, drown him. This, in short, is a sufficient reply to the whole doctrine.

An easier explanation of the symptoms may be given, and which is in consonance with the structure and functions of the parts concerned. With respect to the catarrhal species, the way in which respiration is performed, points out at once the seat and cause of the difficult breathing. Both inspiration and expiration are performed slowly, and with a wheezing noise; all the force of the proper respiratory muscles, as well as those attached to the scapulæ and neck, and clavicles, exert themselves to dilate the chest, in order to get the air admitted. The air, however, evidently does get into the lungs, though with great difficulty; and it is pressed out with as much; the elasticity of the ribs being assisted by the strong action of the abdominal muscles.

Now, these circumstances (namely, the slowness with which the air is admitted and expelled, and the hissing or wheezing sound that is observed,) show that the air is passing through a very much narrowed channel: the small ramifications of the bronchia are obstructed, many of them perhaps totally, others partially. The manner of breathing shows that this must be the case; and we have therefore to inquire, what causes are capable of so obstructing the branches of the trachea, and especially why they act only at intervals. Now, such obstruction of the bronchial tubes may be produced, 1st, by causes external to the trachea; as tumours pressing upon it; 2d, from any matter filling the cavity of the tubes; or, 3d, from a mere thickening of the membrane lining these branches. If it were the first cause, the dyspnœa would be permanent. Such states, in fact, have been discovered upon dissection. But this could not be the cause of periodical asthma. If it arose from mucus or the like, this would be thrown off by coughing; but on many occasions, no mucus is discharged for several hours; and frequently there is little or none, and not at all in proportion to the violence of the paroxysms. Is it then the third cause, the thickening of the membrane? This, I have no doubt, is the case: for it explains all the symptoms, and is in perfect accordance with other affections of the mucous membrane.

This may be illustrated by reference to the nostrils, where anything irritating the membrane, so as to increase the action of its vessels, and thereby determine to it a greater quantity of blood, causes the membrane to swell; and thus the nostrils become obstructed, there not being sufficient room for the air to pass. Now such a swelling of the membrane is induced by cold; and by any irritating matters directly applied; thus, tobacco will, in those unaccustomed to it, produce such an effect; and it is then said, "taking snuff will give a cold in the head." When this has continued for some time, the membrane, as a consequence of the vascular excitement, begins to secrete mucus; after which, the swelling of the membrane declines, and the passage of the nostril becomes again free: after many returns of this kind, the thickening of the membrane becomes permanent, and the passage of the nostrils is never quite free. These passages are naturally smaller in some, than in others; and this gives a predisposition to such an obstruction of the nostrils.

Now all this may be fairly transferred to the ramifications of the bronchia; the analogy is perfect: for the membrane which lines those passages is of the same nature, and liable to be affected in the same way, through the whole extent of the air passages. The paroxysm appears to take place in the following manner:—

An increased and often inflammatory action arises in the membrane lining the smaller ramifications of the bronchia, and possibly in the air cells also. This occasions the membrane to swell or thicken, which of course has the effect of narrowing the passage; the air enters slowly and with difficulty; and by passing through tubes thus narrowed, occasions the wheezing sound.

After a time, the secretion which was suspended, begins to return; at first, the fluid discharged by coughing is thin and frothy; then more viscid and plentiful; and under this discharge, the swelling of the membrane subsides, and the fit goes off, as in the case of the nostrils, as I before observed. This species of asthma, which is by far the most common, is, in fact, a catarrhal affection of the smaller branches of the bronchia, and is brought on by the same causes as common catarrh; namely, cold, and different irritations, direct or indirect.

The recurrence, or periodical character of the disease, is to be explained by the membrane becoming more irritable from repeated attacks of inflammation, which leave it in a partially thickened state. This appears evident from the imperfect manner of breathing that is observed in the intervals. The predisposition to the disease consists in a naturally narrow state of the air tube, in consequence of which, slight affections are sufficient to obstruct the passage. Deformity of the chest may also contribute to form the predisposition.

The coldness of the extremities, the feebleness of pulse, and general want of circulation seem adverse to the idea of inflammation in asthma. But these symptoms are the necessary consequence of the air not getting into the lungs in due quantity, and take place, whatever is the obstructing cause. It is seen, for example, in the last stage of croup, which is a decidedly inflammatory disease; and in pneumonia also.

The analogy of this kind of asthma with *stricture of the urethra*, is also very strong: in stricture, there is always some degree of difficulty in passing the urine; but this is much greater at intervals; it often recurs, as it were, by paroxysms; is brought on by irritating causes; and lasts for a few hours at a time, and then declines.

Asthma has been by some supposed a *nervous* affection; from the irregularity of its attacks, and its being sometimes brought on by passions of the mind. It has been also referred to the stomach, because the paroxysms are induced sometimes, and always aggravated, by a disordered state of this organ. But when there is a strong disposition to any disease, very slight disturbances in the system of almost any kind, are sufficient to bring it on. If it depended so much upon the stomach as is supposed, an *emetic* should carry off the paroxysm; which, however, is rarely the case.

If the kind of asthma just described, the *catarrhal*, were a *nervous* or *spasmodic* disease, *opium* ought to take it off; but in general, opium rather aggravates than relieves. Combined with ipecacuanha, it will sometimes give relief, by determining to the surface; just as it does in ordinary catarrh.

The pathology of the other variety, the *dry* species of asthma, appears to be different. There is here no affection of the air-passages, nor of the lungs themselves. The disease appears to be altogether muscular; the paroxysm consisting in a spasmodic affection of the diaphragm, as may be inferred from the painful sense of constriction, referred by the patient to this part; and by the imperfect way in which respiration is performed. The breathing is short and not slow and laborious, as in the catarrhal species; and there is neither cough nor expectoration. This affection not depending upon any vascular change, but being wholly muscular, is apt to take place suddenly, as is the case with other spasmodic affections, and to go off in as sudden a way, while it is relieved by opium and other anti-spasmodics. There is doubtless a prior cause determining the diaphragm to such spasmodic action, and which is referrible to the brain, or some other part of the nervous system. So far, the disease may be termed *nervous*. This accounts for the effect of mental emotion, in producing the paroxysm. Asthma of this description may be compared with epilepsy; the primary cause being seated in the brain, whilst the effect displays itself in distant muscles.

It is not improbable that the catarrhal species of the disease is sometimes attended with a spasmodic state of the diaphragm; a muscle that is readily and even naturally excited into action, by irritation of the mucous membrane of the trachea.

In the *treatment* of asthma, the distinction I have pointed out between the two varieties of the disease, the *catarrhal* and the *spasmodic*, or the *moist* and *dry* species, is to be kept in view; as some of the remedies applicable in the one case, are adverse to the other. This will be shewn, in speaking of the different means in use on these occasions.

The treatment altogether may be divided into two parts; that which is applicable during the paroxysm; and that which is employed in the intervals, with a view to prevention, or the radical cure.

1. Of the treatment *during the paroxysm*. The remedies employed at this time are palliative, merely, and have little tendency to prevent a recurrence; on the contrary, some of them tend rather to favour this, and are liable to objection on this account. The object here is, to put a stop to the paroxysm, or at least to lessen its violence, and shorten its duration. The means in use are various, and are now to be noticed, in order.

1. *Bloodletting*, though it generally is capable of giving relief, and therefore proper in very urgent cases, is by no means applicable as a general remedy in this disease. It is not so necessary as at first might be imagined; for though the distress of the paroxysm is very great, it is seldom that it proves fatal. The pas-

sage of the blood through the lungs is not so much interrupted, as in peripneumony; there is not the suffusion of face, nor the bloated countenance, that take place in that disease; on the contrary, the face is pale and the features are shrunk in the fits. The anguish felt is from the want of oxygen, and not from the want of circulation through the lungs; as indeed is evident from the pulse, which is generally freer than in peripneumony. In vigorous habits, and in recent cases, bleeding is both safe and proper; but in weak subjects it rather tends to favour the return of the paroxysms, by increasing irritability. *Cupping* is, perhaps, the best mode of taking away blood, in these cases.

2. *Emetics* generally give relief, whether they excite nausea only, or full vomiting. The most powerful are, however, often necessary to ensure the effect; tobacco is often of great service on these occasions, notwithstanding the deadly sickness it produces.

3. *Cathartics* have little or no power to carry off the fit, but are useful to unload the *primæ viæ;* calomel and jalap are well adapted to this purpose. Violent purging has sometimes apparently brought on the paroxysms.

4. *Diaphoretics*, and even simple *stimulants*, such as ammonia, are useful where the general vascular action is feeble, and the extremities cold; but copious sweating is generally bad, because it cannot be induced without increasing too much the general circulation. On this account the *hot bath* is injurious.

5. *Diuretics* have been always much commended in asthma, and may do some good, upon the principle of counter-irritation. *Digitalis* is said by Drs. Percival and Ferriar to be useful. I have given it without advantage: it is too slow in acting to relieve the paroxysm.

6. *Antispasmodics*, as valerian, camphor, musk, asafœtida, &c., have been much employed, and with various effect. These are all *stimulant*, more or less; and, where the habit is weak, may do good by equalising the exertion of the living power, and especially by determining to the surface. In strong habits, and in the catarrhal form of the disease, they are objectionable, by increasing too much the general circulation.

7. *Narcotics*, (opium more especially,) are liable to the objection of preventing expectoration. In the purely spasmodic variety of the disease, they may be useful, and will often take off the paroxysm very quickly. The hyosciamus combined with nitric acid, is less objectionable than opium, as not checking expectoration, at least in the same degree.

8. *Expectorants*, (as they are called) or the *ammoniacum* and *myrrh*, are frequently given, but are seldom useful in the fit. *Demulcents* are unworthy of notice. *Blisters* are occasionally of service.

9. The *Inhalation of Vapours*, or of vinegar, æther, and burning gums, appears a direct and obvious practice; but has not been found of much benefit. As pure air is so eagerly sought after in the paroxysm, much benefit might, *a priori*, be expected from the inhalation of oxygen gas. Dr. Beddoes and some others, assert that it has answered the purpose, but the evidence in its favour is insufficient; it is worthy, however, of further trial. But although it should be found capable of relieving the paroxysms, it is not certain that it would prevent a recurrence in any degree. It requires consideration also, what effect it might have upon the inflamed membrane of the bronchia.

Dr. Ferriar says he used *hydrogen gas* with advantage; others have used the *hydro-carbonate*: these, from their antiphlogistic properties, (the reverse of oxygen,) may, perhaps, be calculated to take off the inflammatory action of the vessels in the mucous membrane, upon which, as I suppose, the paroxysm depends. Some authors assert, on the contrary, that all the gases have been hurtful: but probably the censure is as indiscriminate as the praise.

Secondly, of the treatment of asthma *in the intervals*. This is by far the most important; the object is, to lessen the disposition to future attacks. This is done by diminishing the irritability both of the general system, and of the parts immediately concerned.

Tonics tend to diminish irritability, and in this way, may lessen the disposition of the disease to recur. In ordinary catarrh, they sometimes appear to prevent recurrence, but are only useful where the breathing is free in the intervals; that is, where the lungs themselves are not materially affected; and this appears to be the case in asthma. The *cinchona* is sometimes useful; but more advantage is derived from *bitters*, zinc, chalybeates, myrrh, and the like.

The state of the stomach should be attended to, though this point is not of all the importance that is generally supposed. Flatulency, no doubt, should be avoided. A total change of diet, as well as of the other circumstances of the patient, has sometimes appeared to subdue the disease.

The *cold bath* is of great benefit used in the intervals, if the respiration is tolerably free. The *warm bath* is always bad.

Change of climate has often removed the disease. *Issues* and *setons*, at remote parts, as on the thigh, are of occasional benefit.

Whatever is to be done, it can only be by long perseverance; cautiously avoiding every known exciting cause; for the longer the intervals are protracted, the greater is the chance of the disposition declining, so as gradually to wear itself out.

FOREIGN DEPARTMENT.

ANATOMY.

On some general conditions of the complete Acephalous State. Read before the Philomatic Society, June 17th, 1826. By M. Geoffroy Saint Hilaire*.

In giving an account to the Philomatic Society at its former meeting, of an interesting communication made some days before to the Royal Academy of Medicine by one of its honorary members, Dr. F. J. Moreau, I entered into some details which the Society expressed a wish to have presented to it in writing. Those details form the subject of the following paper.

M. Moreau perceiving me at the Academy of Medicine on the 6th of June, informed me that he was going to present a human monster, a complete acephalus, born that morning; "Will you present," I replied, "at the same time, both the twin which was first born, and the placenta common to the two?" M. Moreau could not conceal his surprise, and expressed it to me, before giving an affirmative answer. I was led last January to examine the question of this particular kind of monstrosity, and since that time I have published, as the result of minute and accurate researches, that a monster reduced to two thirds, a half, or only a third of an individual, was *necessarily the imperfect twin* of another, whose development had been complete.

Accustomed to see organic deviations, whatever the nature of them might be, reducible to certain conditions, forming one well connected system, and as intimately united as the organs in the normal state, I was anxious to examine the forms of the monster about to be presented to the Academy. In fact, on examining it, I recognized an organic whole, of the same class as those which had before occupied my attention; it was a new species of my genus, *hemi-encéphale*.

There was no difficulty then in the case; from the investigation of the conformation, of the *hemi-encephali*, I found that these monsters are produced under the influence, and as it were under the protection of one or more twin brothers. I had even arrived at the conjecture, a conjecture borne out by several facts, that the *hemi-encephali* are individuals orginally in the perfect and normal state, but afterwards attacked with a greater or less atrophy, i. e. losing in regular succession a part of themselves, and becoming impoverished as they increase, because the more essential organs of life, the cerebro-spinal system, the heart, the lungs, the liver, and the other glands, are one after another removed. How should they continue, if left to their own strength for the completion of their development! How very apparent, that beings who want the most essential parts, cannot exist with the mere resource of an impoverished placenta; for the circumstance must not be forgotten, that in the acephali, which are reduced one-third only, the urinary and sexual organs alone exist well formed. For, if all the parts were formed with the same degree of regularity, it is necessary that a well-formed placenta should supply them. I will admit for a moment a contrary hypothesis; in this case, an impoverished or weakened placenta would not produce any thing useful; for from the first periods of gestation, every thing would cease to be in harmony to the relations with the uterus, and the contents would be readily expelled. On the contrary, in order that a placenta in the natural state should maintain itself, it is necessary in its turn, that a fœtus endowed with perfect vital energy should re-act on it. Thus the presence of a twin is necessarily connected with the development of an acephalous monster. It can be conceived then, how a placenta common to two beings may contribute to the existence of one entire individual, and of a second reduced to the fraction of a fœtus.

Keeping these points in view, I endeavoured to verify them by a series of investigations. I also considered, that if the presence of a natural fœtus with a complete acephalus was so imperiously required, as my foregoing deductions had indicated, instances would not be wanting to furnish me with proof. Thirty-nine literati, whose names follow, have all stated, that the birth of a monster deprived of the head and heart, is accompanied with the birth of one or more well-

* Revue Medicale, July, 1826.

formed children*. These are Antoine, Askinson, Bracq, Brera, Bland, Bonn, Bush, Buttner, Clarke, Cooper, Curtius, Leleurye, Dumonceau, Duperrier, Duverney, Everhard, Garnier, Giel, Gilibert, Gœller, Gourraigne, Tseuflamm, Katzy, Klein, Kimdmann, Lankisch, Lecat, Mery, Monro, Moreau, a physician of Nancy in 1784, Odkelius, Prochaska, Pujol, Schelhammer, Sœmmering, Superville, Tiedemann, Vogli, and Winston. To this list may be added the case communicated to the Society by one of its members, M. Moreau. Besides these, other cases of acephali are known; such as those published by MM. Chevreul, J. Cloquet, Gall, Guignard, Huermann, Malacarne, Meckel, Prochaska, J. J. Sue, Sulsman, and Voigler, all together, ten or twelve; but we have no particulars respecting them. Almost all these monstrosities have been for several years in different museums, the possessors of which have had it in their power only to give an anatomical account of the preparations. On one of these I have succeeded in obtaining some particulars, which do not appear to have been given by Beclard; they are alluded to by Elben† in his dissertation. The case came under Dr. Chevreul, and is as follows:

"Madeleine Mercier, servant, aged 25, entered on the 4th of September, 1813, the Hospice of the Maternité at Angers. She stated, that if she was pregnant, she could not be advanced more than six months and a half; and added, that she had come to the house more on account of the enormous size of the abdomen, which she believed to be the effect of dropsy. On the third day pains came on, and on the bursting of the membranes the room was almost inundated. The girl was delivered of a well-formed male child, which appeared to be about the seventh month, and the respirations of which were very feeble. Shortly afterwards, another male fœtus came away, but it had neither head nor superior extremities." M. Beclard, then *chef des travaux anatomiques* at Paris, happened to be in Angers at the time; he dissected the acephalous fœtus, and in his writings he dwelt especially on the absence of the greater part of the thoracic viscera. Being struck by the constant appearance of the same circumstance, and viewing this as one of the most curious facts respecting monstrosities, I have shown that it will serve at least as a basis for a classification of monsters, i. e. a description raisonnée of each sort of monstrosity, and for a nomenclature logically deduced from the fact.

It has been alleged that Tiedemann's investigations, and those of several other anatomists are opposed to my conclusions. But I find that in the case which came under Tiedemann's notice there was a second natural fœtus, and he lays stress on this to show that one placenta alone nourished the twins. M. Breschet, who at the time my paper was read, raised this objection, since informed me that he is perfectly of my opinion, and that he had indeed expressed it before me in his article *Acephale* in the *Dictionnaire de Medicine*. In that article M. Breschet says, "Les seuls cas avérés de fœtus acephales avec grossesse simple sont ceux de Vallisneri, de Sulsman, et de Doneaud; encore, dit on que les meres rendirent beaucoup d'hydatides, ect. MM. Everard Home et Meckel ont écrit que non seulement les acephales, mais que presque tous les fœtus monstrueux sont des jumeaux; etc. Un jumeau, n'est point monstrueux, parce que le germe eroit defectueux, mais parce que la coexistence d'un autre fœtus l'a empeché de se developper." It is evident that the accordance of our views rests on facts of a similar nature.

* Authors who have published accounts of complete acephali in a chronological order; those marked in *italics* have left in doubt the question, whether the *acephali* necessarily arise from double pregnancy:—Antoine Everhard, 1663; G. de Lankisch, 1679; G. Ch. Gœller; G. C. Schelhammer, 1690; A. Vallisnery, 1697; Antoine, 1703; Pujol, 1706; Duverney, 1706; Mery, 1720; J. H. Vogli, 1720; J. C. Kundman, 1722; *Sulsmann*, 1726; D. Superville, 1739; Winslow, 1740; *Gourraigne*, 1741; G. Henermann, 1751; Bracq, 1752; C. W. Curtius, 1762; N. Lecat, 1764; L. G. Buttner, 1768; Dumoncean, 1768; Deleury, ——; *Doneaud*, 1772; J. G. Giel, 1773; Cooper, 1775; Gilibert, 1791; *Guidnard*, ——; R. Bland, ——; A. Bonn, 1781; V. Moreau, 1784; E. Odhelius, 1786; Duperrier, ——; *F. G. Voigtel*, 1790; C. C. Klein, 1793; J. Clarke, 1793; A. Monro, 1794; J. J. Sue, 1797; Garnier, 1801; *J. D. Busch*, 1803; G. F. Isenflamm, 1803; Atkinson, 1804; *Gall*, 1809; *J. F. Meckel*, ——; *V. Malacarne*, 1811; *Prochaska*, ——; Sœmmering, ——; Chevreul, 1813; Brera, 1815; *Beclard*, 1815; *J. Cloquet*, 1815; Moreau, 1826.

† To those of our readers who take an interest in this subject, we recommend the dissertation of Elben; it is a most valuable compilation, and the plates, 22 in number, are well executed. *De Acephalis sive Monstris corde carentibus Dissert. Auct. E. Elben*, c. 22, tab. lithog. Berol. 1824. 4.—Ed. L.

*Ossification of the Pia Mater.**

M. Lenoir presented to the Anatomical Society, a portion of pia mater of th brain converted into bone; it was taken from an individual 49 years of age, who had died from ramollissement of the brain. The ossified part consisted of two flat pieces about the size of an inch, which adhered to the brain by one of their sides, and the other to the arachnoid.

Case of Peritonitis mistaken for Pregnancy. Anatomical Society of Paris.†

Mons. Thouret read a very remarkable case of chronic peritonitis, which had been mistaken for pregnancy, and which was not discovered until after the death of the patient, at the moment when the Cæsarian operation was about to be made with the intention of extracting the fœtus, which was considered to be alive!!

PHYSIOLOGY.

Memoir on Absorption. By DAVID BARRY, M. D. Member of the Royal College of Physicians in London, and resident Physician in Paris.‡

Absorption in living animals, of a foreign substance, is the transportation into the general circulation of something that is without the body. From this definition, when a liquid, for instance coloured water, is placed in an open vessel, and a glass tube is taken, one end of which is plunged in this fluid, the other in the cavity of one of the great thoracic veins, and the coloured water rises in the tube, contrary to its gravity, absorption is said to have taken place.

This ascension, or absorption of the liquid, being exclusively placed under the influence of the atmospheric pressure, as has already been proved by the experiments detailed in the memoir "On the Causes of the Movement of the Blood in the Veins," it is evident, that if the liquid was placed in a vacuum instead of being exposed to the air, it would not mount, but descend, provided that the pressure around the extremity in contact with the liquid was made less, or even equal, to that surrounding the extremity in communication with the thoracic end of the tube. Hence the circumstances, or immediate causes necessary for the absorption are two—1st, The communication between the liquid and thoracic cavities; 2d, The diminution of the atmospheric pressure, owing to the expansion of the cavities around the internal extremities of this communication, by the pressure made on the external point.

From these data, and supposing that the veins and lymphatics are the true organs of absorption, it was natural to presume that the absorption of poisonous matter for example, placed on a wound in an animal, would not take place if the points of contact of the absorbing surface, and the matter to be absorbed, were placed in a vacuum. This was not difficult to prove.

Several kinds of poison, the fatal effects of which are well known, such as Prussic acid and the like, were taken. Repeated experiments had proved, that six drops of this acid introduced under the cellular tissue of the thigh, in a grown rabbit, produced death in two minutes, and that a grain of strychnine put on a wound made in the same animal (of the same species?) produced death in five or seven minutes, and that the same quantity of upas killed it in ten or twelve minutes.

Several experiments were made with these three kinds of poisons on rabbits. Almost always there were two rabbits placed under the same circumstances at the same time, except that the vacuum had been made over the empoisoned wound in the one animal and not in the other. The animal in which *no* vacuum had been made died about the time we have spoken of; the others, on which the vacuum *had* been made, never showed the slightest symptoms of poisoning, although the substances had remained in contact with the injured surface for half an hour, two hours, nay, five hours.

When the poison was placed by means of a tube, under the integuments, at a distance from the wound by which it had been introduced, and a cupping glass applied on the sound part, the wound being without the vacuum, there was no sign that the poison had been absorbed during the time that the cupping glass had been employed. The instrument being taken away for an hour, or two hours, the animal, under the integuments of which the poison was placed, lived, although the same substances would have killed it in

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* Nouvelle Bibliotheque Medicale, Juillet, 1826.

† Idem.

‡ Annales des Sciences Naturelles, Juillet, 1826.

a few minutes had not the cupping glasses been applied.

In these cases, when the appearance of tetanic convulsions was looked for, it was only necessary to apply the cupping glasses to remove the symptoms, to open the skin, and save the life of the animal, by taking away the poison.

If, on the contrary, the cupping glass was applied on the skin that had been injured by introducing the poison, and if the latter was placed on the integuments not under the cupping glass, no absorption took place, although the instrument had been applied for three quarters of an hour. No sooner was it removed than absorption took place.

If during the time that the cupping glass is applied, an incision be made in the integuments, between its edge and the parts where the poison is applied, the absorption will take place as if no cupping glass had been used.

Such is an outline of Dr. Barry's experiments, which, however ingenious they may be, are far from accounting for every one of the phenomena he has stated. We should like this gentleman to explain how it happens, that when the cupping glass is removed the animal lives for "an hour, or two hours," after the vacuum is taken away, even when the substances that would kill the animal in a few minutes are underneath the skin. Does it happen, we would ask, that these substances are decomposed by the animal heat? or are the vital functions of the parts so altered by the sucking of the glass as not to be able to resume their wonted activity for a time? We put these merely as queries. A satisfactory answer is wanting to fill up the deficiency in the history of this very important animal function. We confess also, that we are at a loss to draw any conclusion from the last fact mentioned, namely, that "absorption takes place as if no cupping glass had been applied." We can conceive, under all the circumstances detailed, that this would occur if the wound was situated between the heart and the vacuum; below the glass we should not have expected it, or at least not so soon, although sooner than if the wound was made at the sides. We will return to this paper shortly.

SURGERY.

On the radical cure of the growing in of the Nail, according to the plan of Mons. Dupuytren. By Mons. ROBBT.*

The disease known under the name of "onychia" is of two kinds. In the one case, the fleshy parts which surround the root of the nail, are sound; as well as the matrix itself. The change of structure is confined to the side of the unguis alone, sometimes affecting both sides at the same time. In the other case, the fleshy parts surrounding the horny substance are fungous, the matrix is truly changed, and the whole of the nail participates in the affection.

In the first case, tearing away the nail cures the patient at once. In the second, the disease will return again, unless the nail, fungous excrescences and matrix of the nail be completely removed in the way we shall speak of immediately. Mons. Dupuytren is of opinion that the first of these diseases does not pass into the second, because in the latter affection the soft parts are always those that are primarily affected.

Without noticing all the causes enumerated by writers, we will simply mention contusion, which often produces an alteration of the structure of the matrix of the nail.

In the first variety, the disease commences by an inflammatory swelling of the integuments in the neighbourhood of the internal angle of the horny substance, which gradually covers the nail; a slight excoriation supervenes, accompanied by severe pain, and the nail penetrates into the tissue of the skin. This is followed by an ulcer, that discharges a sanious and purulent matter; there is an appearance of ecchymosis in the neighbourhood of the nail without any fungous growth around its root. The surrounding irritation, however, makes its increase more rapid. There are sometimes destruction of the edges of the nail, and ulceration of the soft parts; both of which are observed when by accident the nail falls off; the nail becoming then yellow, and as it were mortified. More frequently there is along the internal edge of the nail a simple painful fissure from which pus is discharged. It is in these cases, that simple evulsion succeeds, and where we may employ with success all the other me-

* Archives Generales, Juillet, 1826.

thods which are employed, either in acting on the soft or hard parts.

In the second variety of this disease, which has been named onyxis, there are certain symptoms that point it out to be altogether of a peculiar nature. The soft parts that surround the matrix of the nail are swollen; fungous sprouts arise, which bleed on the slightest touch, and which occasionally completely cover the nail. It is by no means rare even to see the inflammation produce destruction of the soft parts, and the nail to become the seat of an ulceration, which goes so deep as to expose the bone. In this case, the inflammation of the periosteum and the necrosis of the phalanx, point out the amputation of the part as necessary. The continuity of the nail is broken. Its tissue is divided into bundles, which penetrate deeply into the fleshy fungous structure that surrounds it. The pains are sometimes so acute as to excite convulsions, while the limb and foot become swelled.

If during this stage excision and cauterization are had recourse to, the fungous excrescences arise again. The disease has been known to recur after the nail had been rooted up four times, thus showing a decided difference between the two kinds of the complaint.

Mons. Dupuytren has two different modes of treating these affections, the one adapted to the first, the other to the second case.

The first mode is to take a pair of stout straight scissars, one blade of which has a very sharp point. This is pushed quickly up the middle of the nail on its lower surface, as far as its root, and the unguis cut into two parts. A stout pair of pincers is now applied to the anterior points of the nails, and one or both portions are turned backwards and separated from its root. If part of the flesh be torn away, the parts are cauterized. This mode of treatment is frequently so successful, as to allow the patient to go about his usual affairs in eight days after the operation has been performed.

Second mode. If the operation is to be performed on the great toe, the surgeon takes it between the thumb and fore finger of the left hand, and with a convex bistoury, makes a semilunar incision, having the concavity in front, about four lines posterior to the junction of the soft and horny parts. The nail is now taken by a pair of pincers, and turned back on itself. If necessary, the nail may be previously divided, as in the former case. The object, however, is to take away every part that may be likely to re-produce the disease; and as it is absolutely necessary that the incision should be commenced at the distance of four lines behind the junction of the horny and soft parts, so as to get behind the root of the nail, care must be taken to commence the incision as laid down; going behind this spot may lead the surgeon into the joint.

After the operation, the wound is covered with a light dressing, and if painful, a cataplasm moistened with laudanum ought to be applied. A small quantity of charpie should be laid between the toe that has been operated on, and the sound toes. If the patient keeps quiet, the cure will usually be complete in eight days.

Our readers will readily perceive that the two diseases here pointed out, are neither more nor less than what have been described by Mr. Wardrop in the *Fifth Volume of the Medico-Chirurgical Transactions*, under the names of the "Growth of the Nail into the Flesh," and "Onychia *Maligna*." Few English surgeons will, we think, be inclined to follow the treatment of Baron Dupuytren, after they have once given a fair trial to the more lenient but equally efficacious means pointed out by Mr. Wardrop. We have had opportunities of witnessing the decided advantage of caustic applications in the first, and of the internal use of mercury in the second disease, so that we can with confidence recommend Mr. Wardrop's plan to those who may still be ignorant of its real value.

On the Cure of Wounds of the Intestines, without the assistance of art. By Mons. Baillard. (Ibid.)

A wound of the intestines may be either a simple puncture, or longitudinal or transverse one. The longitudinal may be small or large, and transverse, so great as to cut through a fourth, a third, a half, or even the whole of the diameter of the gut. We present here the results that are found, when the injury of the intestine has been left entirely to the reparative efforts of nature.

When there is a small puncture of the intestine, the contraction of the muscular coat, and the swelling of the mucous membrane close up the wound, without effusion of either liquid or solid matter; the gases contained in the gut sometimes escape, and produce tympanitis, but nature speedily repairs the injury. The

flatus is soon absorbed, inflammation attacks the orifice of the wound, which, in process of time, adheres to some part of the peritoneum, by means of an albuminous exudation, and a cure is effected.

The author of this paper is of opinion that the puncture of the intestines is not a matter so much to be dreaded as some individuals suppose. When the wound is of a longitudinal form, and only a few lines in length, it is cured exactly in the same way.

When the wound is larger, and admits the epiploon between its edges, the albuminous exudation produces the same effects that we have spoken of, and the cellular tissue between the several coats of the gut materially assist in producing the cure. It acts, in fact, like a plug, which is frequently seen floating in the internal part of the canal, covered with a new formed mucous membrane.

In cases where the injury has been more extensive, whether caused by a cut or a contusion, the same process takes place. It is in this way that we are able to explain how large wounds from bullets, swords, sabres, injuries done by carts passing over the body, and the like, are cured without any external opening in the anterior abdominal parietes. When the injury, however, has divided the intestine in the greater part of its diameter, the same process may take place according to the extent of the part that has been injured. When the whole of the diameter is cut through, the ends retract, and permit at first gas only to escape, the intestine speedily relaxes, fecal matter escapes, and the patient dies.

Although many experiments have been made in this country on this very interesting subject, yet we cannot help thinking that much remains to be done, in order to set at rest several very important questions about the reparation of injuries of the gut. We are led to this remark by a very interesting specimen which we lately saw Mr. Lawrence exhibit. A woman had lost a small piece of the intestine, in consequence of a hernia (we believe) and an artificial anus followed. The gut, without surgical aid, adhered to the edges of the opening, and no fecal matter passed by the intestine below the opening or into the abdominal cavity.

It was the most complete specimen of the reparative process that we ever saw.

To the Editor of THE LANCET.

SIR,—There is now living in this town a gentleman upwards of 70 years of age, and, as I think his case curious, I take the liberty of sending you a short account of it.

Six years ago, J. J. Esq. became low and melancholy; he made no particular complaint, but shewed a great aversion to strangers, and confined himself to the house. Two years afterwards he took to his bed, and about the same time his bowels became very torpid, and were not relieved more than once a week, when he got up to shave himself. In a short time, he rarely had an alvine evacuation oftener than once in three weeks. During the heat of summer, this costive state of his intestines was greatly increased, and it was no uncommon thing for him to be a whole month without a stool.

His bowels not having been opened for three or four weeks, it was observed by his friends that he had an evacuation on the 17th of November, and it is certain that he had no further relief for five weeks and two days, when he consented to take some figs boiled in gruel, which produced the desired effect on the 25th and 26th December, 1825. In January 1826, he had no stool whatever, but his bowels were opened once in February, and from that period until the present time he has continued to have an evacuation about every three weeks, although it frequently happens that a much longer interval occurs.

Mr. J. is of a thin spare habit, and passes the greater part of his time in reading and conversation; he occasionally complains of slight indisposition, sometimes of pain and tension in his bowels. His skin is dry, and free from any offensive smell; the kidneys perform their natural office; the appetite is good, and indulged both in eating and drinking to an extraordinary degree; he sleeps well, and generally rises once a month to have his bed made. Upon some occasions, when under the influence of fear or surprise, he has been known to get up, walk about his house, and return composedly to bed.

These particulars have been communicated to me by a near relative of his, and I shall feel obliged by your inserting them in THE LANCET.

I am, Sir,
Your obedient servant,
RICHARD WILLIAMS
Surgeon.

Aberystwith,
August 27, 1826.

THE LANCET.

London, Saturday, Sept. 9, 1826.

THAT most versatile body, Dr. James Copland, comptroller of the Mausoleum, and lecturer to empty benches, the most successful, though, God wot, the most innocent and undesigning practitioner of the art of sinking, that ever ministered to oblivion, lacking other employment has fallen foul of his friends, or rather his friend, for such we believe Medico-chirurgical Johnson has generally been esteemed. In the last number of his sullen "Repository," after telling us of his resolution, as if that were necessary, "to care little about Sauvages, to pay small attention to Hippocrates or Celsus, or Aretæus or Galen," he proceeds to deliver his opinions of a work treating so largely, as he tells us, "of *almost* all things in *heaven* and earth," that it produced on him "confusion almost amounting to vertigo," in which congenial state of mental commotion, or editorial phrenzy, he deemed himself a match for the man of "lunar influence," and to it went pell-mell, determined for once to tell the truth.

"The office of any one," says the scribe, "who presumes to present the public with *criticisms*, is not always of a nature to be discharged with comfort: (not consistent with comfort to speak the truth!) we have ourselves endeavoured during our short and by no means pleasing trial (very true, not pleasing to the public,) of the *suitability of our fitness* for the office, (Scotch pleonasm, "*total of the whole*," most exquisite critic!) to act honestly and without partiality; and we have *more than once observed with disgust that the most flimsy publications*, in which every thing common place was expressed in a *style* disgraceful to the literary character of the profession, have in other quarters (JOHNSON'S) been held up as "valuable monographs," and likely to have a "beneficial influence," and we know not what besides. *It is this contemptible flattery* which has lowered medical criticism (which was needless) even below the general criticism of the day, and led to our being afflicted with such a *deluge* of essays, treatises, and practical observations, as threatens to destroy all the common sense of the medical world. Of the vanity of authorship and of criticism also (well done, noble Copland, thou art both author and critic!) we have long required no conviction; (yet the man stumbles on;) and if we have seemed to have borne our office too cavalierly, we are reminded of the futility of human endeavours, whether made by authors or critics, by hearing, even while we write, of the death of some of those whose works have come before us.

"- - - - Say no more; but when God calls, lay aside thy papers; and first dress thy soul, and then dress thy hearse."—Mausoleum, pp. 200, 201.

What maggot passion or whim stirred Copland to the foul deed, we cannot conjecture; we admit, however, that it is very cleverly executed. His thrusts are maliciously to the point, and more sprightly than his square bulky figure might have promised. He runs about his man with an agility truly surprising. The words too, "valuable monographs," "beneficial influence," &c., being among the most hacknied of Johnson's vocabulary, are happily chosen; but the "*suitability of his fitness* for the office" of critic may still be questioned; for at page 204 of the Review, he says, speaking of convulsions, "at all times the brain or medulla spinalis *are* affected;" and again, p. 206, "the employment of opiates in convulsions *are*, without question, always useless," &c. Other vulgarisms and inaccuracies occur at every page, but since we are "reminded of the futility of human endeavours," to use his own words, we recommend him to "lay aside his papers and dress his soul or his hearse," or any thing else that may please him, and leave the trade of reviewing to those who can act "honestly and without partiality," and still enjoy all the "comforts" which such thankless occupation may bring them. He has no original papers worthy of notice.

1. *Principles of Dental Surgery, exhibiting a new method of treating the diseases of the Teeth and Gums, &c.* By LEONARD KOECKER, Surgeon-Dentist, Doctor in Medicine and Surgery. 8vo. pp. 445. London, 1826. Underwoods.

2. *A description of a new patent Instrument for extracting Teeth; also of a patent method of fixing Artificial Teeth.* By J. P. DE LA FONS, Surgeon-Dentist. 8vo. pp. 76. London, 1826. Hatchard and Son; Sams; Highley.

THE teeth, which form what has been called the mill of the microcosm, not only contribute to the mastication of the aliment, but powerfully to the formation of articulate sounds, and are at the same time ornamental. For this reason they have always been esteemed highly valuable parts of the body, and have long enjoyed their presiding genii; at least in all ages persons have not been wanting who have pretended to a particular knowledge of their diseases, and of the art of increasing their beauty, though often it must be confessed at the expense of their utility. The extraction of teeth too has exercised the "mechanical cunning," as Mr. Charles Bell would say, of ages, particularly of our own and the preceding, in which the art, though common to most general practitioners of medicine and surgery, has been made a distinct profession and a prolific source of wealth. A shilling, or it may be a guinea, easily turned, it is no wonder that a host of worthies, who might more properly have broken stones for Mr. M'Adam, should have professed an art which it must be confessed stands very much exposed to empiricism, and offers very little, except profit, to the scientific practitioner. It is true that the natural history of the teeth has engaged the attention of Eustachius, Hunter, and Blake, but some of their works are obviously more interesting than useful, and others, we believe, rarely consulted by dentists. We do not know if we have formed an erroneous opinion, but it strikes us that professed dentists have paid but little attention to the anatomical peculiarities of the teeth, that the instruments they employ for extracting teeth, though often ingenious as applications of mechanic principle, have seldom possessed the peculiar fitness to the various species of these gomphoses, and again to each of a species, an anatomist might desire. Something of this sort, however, has been done by Mr, FAY, an American gentleman, settled in this town, in the construction of his forceps, of which we shall give some account on a future occasion; at present we proceed to the works of Messrs. KOECKER and DE LA FONS. That of the former gentleman is composed of two parts, embracing rather a hasty view of the natural history of the teeth, of their diseases and treatment, as well as more extended essays on the various operations performed by dentists. Books of this kind too often abound with quackery, of which, however, although some passages might have been omitted without detriment to the volume, we are happy in being able to acquit Mr. KOECKER. His work, particularly the former part, is a good deal interspersed with cases, some of them interesting, others too much of course, and a few ridiculous.

The following observations are for the most part judicious.

"In cases requiring dental treatment exclusively, the general health being supposed good, the removal of all acute diseases of the teeth and of the parts subservient to them, to be accomplished by the removal of their respective causes, should be the first care of the dentist, and it should invariably precede every other operative treatment.

When the mouth is not affected with any acute disease, the first object of the practitioner should be to restore the maxillary bones into a perfect state of health and regular action, as the primary

diseases of these parts, are, in cases of this kind, the most dangerous and the greatest exciting causes of the diseases of the teeth, and are invariably productive of much symptomatic inflammation and tenderness in their lining membrane and bony structure, as likewise in the gums, periosteum and alveoli.

The alveoli and periosteum ought to receive our next consideration, as, from their immediate connexion with each other, they are always more or less affected at the same time, by the same causes of disease, and consequently benefited by the same remedies and operations; though such diseases may have originally begun and produced their most violent effects in one only of the alveolar structures in question.

Inflammation, suppuration, mortification, or caries, &c., in these parts, are very common affections. Gum-boils are diseases more properly of the alveoli than of the gums, as they begin first in the sockets and periosteum.

The gums are the next objects of dental treatment. By a proper attention to the primary diseases of the alveoli, periosteum, and maxillæ, these parts are always greatly benefited; and so, also, a successful treatment of the diseases of the gums, reciprocally benefits the sockets. The diseases which most commonly affect the gums and the periosteum, are inflammation and suppuration, scorbutic excrescences, spongy abscesses, &c., all of which ought to be perfectly cured by the complete removal of their causes, which are generally tartar, dead roots and decayed teeth.

When all the parts connected with the teeth, are restored to perfect health, when they suffer neither from debility nor from relaxation, but are strong and vigorous, then, and then only, will the diseases of the teeth become altogether local, and the teeth themselves free from all symptomatic inflammation, and even from susceptibility of diseased action of any kind. This is the time to proceed with the most certain prospect of permanent success in the separate treatment of every local disease of the teeth individually."—p. 139.

There is much reason in the following:

"Particular care should be taken that those operations which produce the least irritation on the nerves of the teeth, and on the periosteum, should be first performed, or that such diseased teeth as are of minor importance, and possess the greatest physical strength, should be first treated; because every individual operation being contributive to the success of the next, the last is of course performed under the most advantageous circumstances, and therefore the most likely to prove successful. By such a proceeding, the most extensive dental treatment becomes a series of operations, each of which is made auxiliary to the next; until at length each individual part, and finally the whole mouth, is restored to perfect health."—ib.

Mr. Koecker observes, that "teeth which are sound, or even in such a condition as to permit their being rendered so by art, provided they are firm in their sockets, or can be rendered so by proper treatment, should never be extracted, however tender and painful they may be;" such pain, according to him, being merely symptomatic, and to be combated by curing or removing the idiopathic disease. It often happens, certainly, that one sound tooth after another is drawn without the least benefit to the patient, the pain arising either from constitutional or more or less general causes; but there are many cases on record, and occurring every day, against the principle which the author seeks to establish. For instance, Rush, in his Med. Enq. vol. i., as our author himself tells us, relates the case of a lady, whom he attended with sciatica, which yielded for a while to the usual remedies, but soon "returned with great violence, accompanied with a severe tooth-ache." Suspecting the rheumatic affection to be derived from the tooth, it was ordered to be extracted. The patient immediately recovered.

"Soon after this," says the same author, "I was consulted by Mrs. T. R., who had been affected for several weeks with dyspepsia and tooth-ache. Her tooth, though no mark of decay appeared in it, was drawn by my advice. The next day she was relieved from her distressing stomach complaints, and has continued ever since to enjoy good health."

A lad of Baltimore, who had epileptic fits, was cured in the same way, and several cases of head-ache and vertigo are mentioned by Dr. Darwin, as attesting the efficacy of the practice. Dr

Gater relates that M. Petit had thus cured intermittents which had resisted the bark for months; and our author tells us of a gentleman whose "whole constitution, but particularly the glandular system, was so much affected as to produce swellings and indurations in the most distant parts, accompanied with agonising pain of the head," who consulted Mr. Lawrence. That ingenious surgeon soon suspected that the teeth were the chief cause of the malady, and recommended the patient to our author, who found "his gums, and all his alveolar processes more or less diseased." The dead teeth and stumps were removed, and the patient recovered in less than a month. Mr. Koecker has related other cases, but we have cited sufficient to show the importance of a more attentive consideration of the teeth as excitants of a variety of morbid actions, than is commonly bestowed upon them. Fistulous abscesses of the cheeks, as Sir Astley Cooper has observed, (LANCET, vol. i., p. 39.) are often produced by decayed teeth, and are always intractable until these are removed. The remark equally applies to diseases of the antrum, the soft and bony palates, &c. We deem the following observations of Doctor Rush worth transcribing, although, perhaps, he has rather over-rated the mischief:—

"When we consider," says he, "how often the teeth, when decayed, are exposed to irritation from hot and cold drinks and aliments, from pressure by mortification, and from cold air, and how intimate the connexion of the mouth is with the whole system, I am disposed to believe they are often unsuspected causes of general, and particularly of nervous diseases. When we add to the list of those diseases the morbid effects of the acrid and putrid matters, which are sometimes discharged from carious teeth, or from ulcers in the gums created by them, also the influence which both have in preventing perfect mastication, and the connexion of that animal function with good health, I cannot help thinking that our success in the treatment of all chronic diseases would be very much promoted by directing our inquiries into the state of the teeth in sick people, and by advising their extraction in every case in which they are decayed. It is not necessary that they should be attended with pain in order to produce diseases, for splinters, tumours, and other irritants often bring on diseases and death, when they give no pain, and are unsuspected as causes of them. This translation of sensation and motion to parts remote from the place where impressions are made, appears in many instances, and seems to depend upon an original law of the animal œconomy." *Med. Eng.* vol. i.

We cannot follow Mr. Koecker in the various sections and chapters which are devoted to the diseases and treatment of the teeth. His plans are generally simple and judicious. Such teeth as are wholly dead are to be removed, and the arts of the dentist, such as stopping, cutting, and filing, reserved for the remainder. Fangs and stumps, which the forceps cannot extract, are removed by the "*levier pyramidal*" of Mr. L. Forgue. The author disapproves of the punch, and we think very justly, and of the key instrument, which effects the removal of teeth at an angle of 90 deg. or so, in which, we think, he is too liberally censorious. It is often an useful instrument. He seems to think the method of perpendicular extraction is wrong, or more painful than the angular, and here also we are dissenters; but, upon the whole, the work is an useful epitome of the dentist's art, and of the prophylactic and remedial treatment of the teeth. The "patent instrument" of M. de la Fons cannot be understood without a reference to the plates at the end of his volume. His "patent method" of fixing teeth consists "in carrying the fastenings of artificial teeth to the hinder parts of the jaw, and fixing them upon the strong-rooted double teeth," to which we can see no objection, it being perfectly natural that he should fix his supports on "those teeth that are best calculated to hold them."

A workman belonging to one of the northern settlements of Upper Canada, was suddenly missed; he had been observed to go toward a neighbouring forest, and was never afterwards seen, although diligent search was made for him for many miles. About twenty years after, some woodmen discovered portions of a human skeleton, and having heard of the loss of their neighbour, took some of the fragments to the deceased's friends. The friends were anxious to obtain the opinion of some anatomists respecting the age of the bones, and on account of its greater portability, the lower jaw, from which the teeth had all fallen out, was selected for the inspection of the persons to be consulted. The opinions of the transatlantic dissectors were so contradictory, that a relative of the deceased coming to England, was requested to show the said jaw bone to some of our teachers of anatomy and surgery. This bone has been handed about town for some time past, and is now in our possession. It has been in the hands of men who have been teachers of anatomy and surgery in this town for very many years, and who now rank high in public estimation. Some said that it was the bone of a man, some of a woman; some that it was 90 years old, some 80, 70, 60, and only one ventured to go below 50 years; that person said 10 or 12, which is nearly double the real age, as is easily shown by removing the anterior plate of the jaw. The permanent teeth are seen snugly cased in their new sockets; not one has appeared above the level of the alveolar process, consequently the individual was *not more than seven years and a half old!!* So little is the progressive development of structure studied in this country!

A Correspondent insists that the statement in our last Number respecting Bartholomew's Hospital, is "incorrect in important particulars." He says,

"Every pupil can at all times learn with the greatest ease the present or past prescriptions for any patient in St. Bartholomew's Hospital. The physicians' prescription books are left in the medical wards, and always accessible. At the head of the bed of each surgical patient, a paper is hung, containing the patient's name and age, the date of admission, the name of the complaint, the diet, and the prescriptions, whether for local or general use. Every new prescription is written on this, with its date, from which the medicines, &c. are served at the shop. The surgeons and Dr. Latham regularly explain to the pupils the nature and treatment of the cases in the course of their visits; thus giving clinical instructions in the proper sense of the term.

"The cases in Dr. Latham's ward are regularly registered in books kept in the wards, and constantly accessible. All interesting cases are also regularly recorded in Mr. Lawrence's ward books; from these they are copied in a corrected form into a general case book, which is open to the examination of the pupil."

We are perfectly aware that the energies of Latham and Lawrence are opposed to the execrable apathy of their colleagues; but a third part of a school is not the whole, and in a general statement we were not bound to notice exceptions. There is ample time to put the establishment on an equitable footing, and, among other grievances, we trust those undertaking bullies, the beadles, will not be forgotten. At present we say no more.

Dr. Allan Smith, of Danville, Kentucky, has removed a scirrhous ovary after the manner of Lizars. The wound was united by the interrupted suture; the ligatures came away on the twenty-fifth day, and the woman gradually recovered.

To the Editor of THE LANCET.

Yorkshire, 15th July, 1826.

SIR,—In the last number of the Edinburgh Medical Journal, I observe a communication signed "Vindex," in which the writer endeavours to rescue from obloquy the far-famed colleges of Aberdeen. Laudable as his motives are, it is not however to be expected that the public will enter on the subject with the same feelings, or be influenced by the same apparent partiality. But the discussion has not been without its use; and though the remedy may not be palatable, it will, no doubt, have a sanatary effect. The nomination of Mr. Josh. Hume to the Rectorship of Marischal College, was its first beneficial operation, and was justly regarded as propitious to the cause of science, and to the character of the College, and for a moment roused its quiescent faculties. Unfortunately, however, a paltry and *self-interested* cabal was suffered to arrest the work of reformation in its very beginning; and as his successor is by no means fitted by nature or education to tread in the foot-steps of such a man as Hume, (whose conduct commanded admiration,) the ancient order of things may be expected to return. It is indeed with surprise I have observed that Aberdeen is ranked among the number of established *medical* schools, where no prodigy of that science has as yet arisen; while our provincial towns, as Leeds, Manchester, Exeter, &c. which can boast of a Hey, a Blackall, and other great names, have not been admitted to the same privileges and distinction. The Colleges of Aberdeen have, indeed, endowments for Professors, there is an infirmary and lunatic asylum, but these advantages have hitherto been shamefully overlooked as favourable to the formation of a respectable school of medical instruction; nor can it be observed that the feeblest ray of genius has ever been displayed by any of the persons holding medical situations in these establishments, to encourage more favourable anticipations under *their* management of means they have long regarded with indifference. Under these circumstances, therefore, we can see no encouragement to those who can afford the expense of a regular medical education at Edinburgh, Dublin, or Glasgow, where they may drink deep of the science, to try the empty brooks at Aberdeen. The *Professors* seldom lecture, and, as it is well known, their sole duty consisted until lately, in *selling* degrees, a traffic which I am glad to observe they have been forced by public ridicule to abandon. It is true, that within these few years the Colleges have appointed *Lecturers*; but as they are selected from among the junior members of the profession, much experience is not to be expected; and they are besides not less obscure as teachers, than the *Professors* themselves. As it must be allowed, the Professors hold offices of public trust; the public, to whom they are responsible, have a right to require the faithful discharge of their duties. There should be no SINECURES; and they are not justified in delegating their duties to another person, any more than are the other Professors; until, like some of them, worn out by a series of long and faithful services. For it is a gross violation of the will of the founders, to appoint men without due regard to *efficiency* as well as talent; and until the medical chairs are filled by men of known celebrity, it is vain to expect that their NEW regulations respecting degrees of M.D. will raise the reputation of these Colleges one step higher than it has ever been; but will rather send students to the other medical schools of the kingdom, and effectually shut up that of Aberdeen; a fate which awaits that otherwise highly respectable seminary, unless its guardians give proper encouragement to men of known fame to accept the medical chairs, whose names might attract hearers, and raise the character of Aberdeen to the height it might (with its local advantages) thus easily attain.

But we in vain look to Aberdeen for the means of accomplishing this end, for the names of Bannerman, French, Skene, are alike unknown in the republic of Science; and now that Government has granted large sums of money for the renovation of these Colleges, it is to be hoped it will reserve to itself the patronage of presentations, by which the evils of local family intrigue, so destructive of public institutions, will be prevented. In fine, the Charter should be surrendered to the King, by the Lord Chancellor, at the approaching visitation, in order that the whole code of statutes (for there is much to be amended) may be new modelled and adapted to the times in which we live, and better framed to second the more early development of intellectual strength.

Yours,

G. R. N.

P.S. I am told, one of the Professors did *advertise* the opening of his class, but he left it after the first half dozen Essays he read to them on the Practice of Medicine, or, as is more probable, that he was deserted by the students!

HOSPITAL REPORTS.

GUY'S HOSPITAL.

Case in which the coverings of a large Scrotal Hernia were torn through; with consequent prolapsus of the intestines to a considerable extent.—Compound fracture of the thigh, dislocation of the humerus and fracture of the leg also occurring in the same patient.

A poor man, suffering under the dreadful complication of injuries enumerated above, was brought to the hospital about twelve o'clock on Thursday morning last. He was immediately placed in Accident Ward, under the care of Mr. Key, the surgeon of the week, who happened at this time to be in the hospital.

The patient was a fine muscular man, about 24 years of age, the accident occurred by his falling to the ground from a height of more than forty feet. It appeared, however, that the fall was not direct, but broken or interrupted by portions of the building which projected. He was picked up in a senseless state, and as the place is situated within a short distance of the hospital, he was immediately conveyed there.

On Mr. Key proceeding to examine the nature of the injury received, and with this view causing the patient's clothes to be removed, one of the most appalling scenes presented itself, which in our intercourse with hospitals we ever remember to have witnessed.

At the lower part of the abdomen, on the left side, there was seen portruding a very large mass of the small intestines; these, on more minute examination, were found to issue from a large irregular wound of the scrotum, apparently (the scrotum having been previously much distended,) of five or six inches in length. The intestines, generally, were of a darker colour than is natural, but there were several distinct spots of ecchymosis to be observed; one of which was of the size of the tip of the finger.

Proceeding with the examination, Mr. Key next discovered a compound fracture of the left femur. The upper portion of bone had protruded through the integuments, occasioning a considerable wound on the outer side of the limb; but at the time of examination was reduced, and it was then carried very much inwards; so great was the force with which the bone had been pushed out, that in addition to the muscle and integument, it had also passed through the clothes of the patient.

The attention of the surgeon was next directed to the peculiar manner in which the right arm was fixed; this was found to depend on dislocation of the humerus downwards. The head of the bone was thrown unusually low in the axilla, and hence the symptoms which characterise this accident were exceedingly well marked.—The elbow was widely carried from the side, and raised so as to be nearly on a level with the shoulder. There was also a fracture of the right inner malleolus, a small wound under the chin, and contusions on various parts of the body. With respect to the constitutional condition of the patient, it was that which is ever the immediate consequence of violent injury,—depression of all the vital powers; the heart's action scarcely perceptible; the surface of the body and the extremities cold, with a pallid face, and bloodless lips.

Small doses of ammonia and brandy were frequently administered, which had the effect, in a slight degree, of increasing the force of circulation.

It was found that the prolapsed intestine was easily reducible; the external abdominal ring being much enlarged; Mr. Key then, by a gentle process of manipulation, returned a portion, but anxious to avoid *directly* handling the parts, he proceeded to close the wound in the scrotum by means of what is termed the "uninterrupted suture," the stitches of which were made very close to each other. The whole of the intestine was now easily reduced, but as Mr. Key, from the increased size of the ring, dreaded its return, he applied a truss, with its pad, over the inguinal canal; the pressure of this truss was about equal to six pounds weight.

It is a circumstance worthy of notice, that there was no peristaltic motion observable in the protruded portion of intestine, which we suppose must have been upwards of a yard in length.

The dislocation of the humerus was speedily reduced, the complete prostation of strength under which the patient laboured, preventing any muscular resistance. The fractured thigh was placed on a double inclined plane, the wound being closed by means of lint and adhesive plaster; the bone was much comminuted, several small portions being removed. The fracture of the inner malleolus was put up in the usual manner.

Evening, eight o'clock. The poor man is now able to answer questions rationally, but he has an unnatural and anxious expression of countenance. Pulse 104, and variable as regards volume, but for the most part feeble in its beats. The tongue

is moist, the lips pale, and the tunica conjunctiva blanched; the abdomen is not tender on pressure; he complains of pain in the loins. Brandy with ammonia have been given at intervals since the morning; these to be continued as occasion may require.

On examining the wound of the scrotum, it was curious and interesting enough to observe the complete manner in which the lips of the wound had already united; this was within the space of eight hours. Mr. Key in pointing out this circumstance remarked, that it was his opinion the sides of the wound could only have been thus effectually kept in contact by the uninterrupted suture*

Sept. 1. Mr. Callaway was called to the patient this morning about six o'clock, and found him with an alarming train of symptoms. The countenance at this time, we learn, was exceedingly anxious, the pulse at the wrist very rapid and scarcely perceptible, the abdomen tumid and tender on pressure, and he had also vomited after partaking of a cup of tea with a very small portion of bread and butter. Mr. Callaway ordered thirty leeches to be immediately applied to the abdomen, and two grains of calomel with one grain of opium to be given directly.

At half-past eleven, a. m., the patient was seen by Mr. Key; he had then somewhat rallied according to the description given by Mr. Callaway of his state early in the morning. The pulse now was very rapid and vibrating; the pulsations running into each other, so that it was impossible to enumerate them. There was great distress depicted in the countenance, he talked incoherently and was exceedingly restless; the abdomen still tense and tender on pressure.

Mr. Key directed twenty leeches to be applied to the abdomen, afterwards using warm fomentations. An ounce of castor oil to be administered in half a pint of gruel as an enema, by means of Read's Syringe, and to be repeated every three hours until the bowels were unloaded. A second dose of the calomel and opium was given at eleven o'clock.

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We had nearly omitted observing that on making inquiry of the patient, he stated that he had for some time laboured under a large swelling on the left side of the scrotum, which he could easily push back, but had not worn a truss.

It is much to be regretted that the friends immediately removed the body, and would not consent to an examination. It would have been interesting to ascertain the state of the prolapsed intestine.

Mr. Key's admission of patients into the Hospital on Wednesday, August 9th, consisted of the following cases:

Males.—Abscess of the hand; ditto of the finger; lepra vulgaris; hæmorrhoids; superficial varicose ulcers of the leg; disease of the bladder; chronic abscess on the nates; fistulous openings in the perineum and scrotum.

Females.—Inflammation of the synovial membrane of the knee-joint; disease of the tongue; hydrops articuli; tumours within the rectum; irritable disease of the mamma; inflamed hæmorrhoid; disease of the ancle.

The two first cases among the male patients were of a trifling nature. The case of *lepra* remains in the Hospital; *six drops* of the arsenical solution were prescribed, to be taken three times a day. The patient with hæmorrhoids has found much benefit from the exhibition of small doses of blue pill, and mild aperients.

Varicose ulcers of the leg. The term varicose ulcer is perhaps not strictly correct, but we use it in its general acceptation, to denote a certain kind of ulcer arising from, or dependent upon, a varicose state of the veins. Cases of this nature are of very common occurrence, and we only notice the present in order to speak of a mode of practice usually adopted by Mr. Key. The patient was about fifty years of age, the ulcers on the

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left leg numerous and superficial, and of many years standing. The veins of the leg were exceedingly tortuous and dilated, and there were several varicose tumours.

Mr. Key directed a vein to be opened with a lancet, from which about eight ounces of blood were taken, and the orifice was then closed. The patient was ordered to observe the recumbent posture, and apply the yellow wash to the leg; five grains of Plummer's pill to be taken at bed time.

Mr. Key remarked to the pupils that he had found much benefit in these cases from opening the veins of the leg and abstracting blood, and it was now his customary mode of treating this description of ulcer.

CHRONIC ABSCESS ON THE NATES.

The patient in this case was a boy about ten years of age; he had a fluctuating tumour of about the size of a cricket ball, situated immediately behind the trochanter major. He did not suffer pain in the hip, nor were the motions of the joint at all interrupted. The boy's general health was good. An opening was made by means of an abscess-lancet, and about three ounces of pus evacuated.

The patient with *fistulous openings in the perineum and scrotum*, left the hospital a few days after admission. It was a case in which we fear but little benefit would have been obtained; the sinuses were very numerous, and connected with apertures in the urethra, so that the urine passed through the openings. The scrotum and perineum were in a thickened diseased state; there was much constitutional and also local irritation, accompanied with stricture.

The case of disease of the bladder remains in the Hospital. We shall notice its termination.

The female cases, with the exception of the two last, are of much interest; but as they all at present remain in the Hospital under particular plans of treatment, we shall reserve a notice of them for a future occasion.

There have been no operations performed at this Hospital of late.

ST. THOMAS'S HOSPITAL.

OBSERVATIONS ON VENEREAL PHAGEDENA, WITH CASES ILLUSTRATIVE OF THE BENEFICIAL EFFECTS OF SPIRIT OF TURPENTINE AS A LOCAL APPLICATION.

The most intractable and destructive form of disease arising from sexual intercourse, is one which frequently presents itself to our notice in the Borough Hospitals; cases of which we have often reported under the title of venereal phagedena. We would here observe, that we limit the term venereal phagedena to the species of sore under consideration, believing it to be of a specific nature, and possessing determinate characters.

The precise form in which the disease first makes its appearance, has not been distinctly ascertained, inasmuch as the patient does not make application for relief, until the disease has far advanced, and the primary characters are of course destroyed.

In the numerous cases that have fallen under our observation, there has been a sore on some part of the genitals, corresponding with the following description: an excavated (but not deep) ulcer of a circular or oblong form, with its edges regular and well defined; the surface of the sore covered with a viscid yellowish slough, but in some cases the slough is of a brownish colour. There is more or less inflammation in the surrounding skin, which is of a dark red, or purplish colour. The patients complain of a constant burning, stinging pain in the part, which entirely precludes them from obtaining repose; there is much constitutional irritation; the pulse is very quick and small; the tongue covered with a thin white fur, but in general moist, and the skin is hot and dry.

In this state the patient is admitted into the Hospital, and in general the symptoms continue unrelieved; for by far the greater number of cases that we have witnessed at the Borough Hospitals have terminated fatally, notwithstanding the varied measures that have been adopted. The extension of the disease is, by a continued process of ulceration, more or less rapid; each morning, on visiting the patient, we find the circumference of the sore increased, a fresh solution of continuity, as the old writers would term it. And in this way from day to day does the phagedenic progress go on, leaving the cavity covered with a slough, which adhered firmly to the parts beneath. On some occasions we have seen this slough removed, and the surface of the ulcer

presenting numerous, and, as it were, acuminated granulations; still the ulcerative process was not arrested. As far as our observation has gone, the slough does not become black or of gangrenous appearance until the latter stage of the disease, when it has made such extensive ravages that the vital powers begin to fail, and the patient labours under typhoid symptoms.

We have been thus precise in stating our observations on the manner in which this formidable disease extends itself, because it appears to us that this part of the subject is as imperfectly understood as the treatment. We find in Mr. Travers' report of these cases, the vague and indefinite term of "*sloughing ulceration*" applied to them, and in other places we read of a "sloughing process commencing," and "a sloughing process extending;" by which expressions we suppose is meant to be conveyed, that the disease extends by sloughing, which is by no means the case, it being in our estimation a purely ulcerative process. It is a curious and important fact, that all the patients affected with this disease come from a particular district, namely, St. Catharine's, in the vicinity of the London Docks; and in the majority of cases that have fallen under our notice, the disease has been contracted in a place called Swan-alley. This fact is so well known at the Borough Hospitals, that a patient is familiarly said to have the Swan-alley disease.

This place is one of the vilest sinks of iniquity in the metropolis, being inhabited by persons principally of the Jewish persuasion, who keep lodging houses for prostitutes. It is the custom of these wretches to obtain very young girls, whom they supply with food and clothing, and in return for which the girls are submitted to the embraces of sailors, who are principally foreigners.

There are three questions which particularly suggest themselves to our mind in the further consideration of this subject.

Is it a local disease of a specific nature? Does it depend on constitutional causes? Or, does it arise from the state of the atmosphere in a crowded Hospital, similar to what is termed Hospital gangrene?

In support of the first opinion we may observe that the disease is only acquired (as before observed) in a particular district, where the intercourse is principally with foreigners. The second question is answered by the fact of the disease occasionally occurring with individuals apparently in good health. A great number of the patients that have this disease are prostitutes who lead irregular lives, indulging very freely in spirituous liquors; but we have two fatal cases distinctly in our recollection, in which the patients were healthy young men.

With regard to the third question, we may observe that what is termed Hospital gangrene, is an epidemic as well as an infectious disease, and it should therefore follow that other patients labouring under ulcers, and laying in the same ward, would be similarly affected; which was not observed to be the case. It has been remarked also that Hospital gangrene seldom attacks sores of a specific nature, such as cancerous or venereal ulcers.

The foregoing observations, we believe comprise all that is at present known on the subject of this disease; it is in every respect, however, well worthy of further investigation.

In the two following cases, great benefit was derived from the application of a terebinthinate ointment, to the ulcers.

Case I.—A. B., ætat. 17, of dark complexion and not unhealthy in appearance, was admitted under the care of Mr. Travers on 13th of July.

She stated that she had been on the town six months, and had resided at Swan-alley six weeks. She had not, according to her own account, been in the habit of drinking spirituous liquors, and during her residence at Swan-alley had connexion principally with foreign sailors.

She was admitted with an ulcer of the size of a shilling, on the upper part of the left labium pudendi. The sore was not deep, it had a sharp and well defined edge, and the surface was covered with a yellowish tenacious slough. There was a sore also on the inside of the thigh, of about the size of a crown piece, the surface of which was sloughy, with bloody points. In the cleft of the nates on each side there was a large ulcer.

The pulse was quick and sharp, tongue furred but moist, and she was complaining of much pain, with extreme restlessness, and an anxious expression of countenance.

The disease had existed three weeks; she first perceived a small sore on the inside of the thigh, which she described as having the appearance of a small wart; this soon ulcerated, and shortly after the ulceration of the labium and that of the nates also took place. Previous to the commencement of any of the sores she had gonorrhœal discharge, with scalding.

July 15. The sores are improved in appearance, and are less painful than when the patient was admitted. Mr. Travers *then* simply directed the application of yeast poultices, but the sister of the ward in addition to these applied the following ointment spread on lint:

Yellow resin, wax, of each 1 *drachm,*
Olive oil, 2 *drachms,*
Spirit of turpentine, ½ *an ounce.* Mix.

The parts have also been fomented with a decoction of poppies.

Mr. Travers remarked that although he disapproved of the principle of sisters or nurses having recourse to means without the concurrence of the attendant surgeon or dresser; yet in the present case, the application had been of so much service that he must recommend its continuance, and thus from a sense of duty to the patient, as it were, sanction the sister's conduct.

The following medicines were directed:

Opium, 1 *grain;* to be taken three times a-day.
Camphor mixture, 1 *ounce,*
Spirit of nitric æther, 1 *drachm;* to be taken three times a-day. A dose of castor oil to be given to-morrow morning.

17. The sores are looking cleaner, and there is an appearance of granulations in each. The turpentine dressing occasions much pain for about an hour after its application. The pulse is less quick, tongue still furred, bowels open, the patient obtained some comfortable sleep last night. Continue the medicines and local applications. Ordered four ounces of wine daily.

28. The improvement since our last report has been progressive; the sores are much diminished in size.

August 30. The sores are now entirely healed, under the above plan of treatment. At one period there was a little disposition to retrograde; this was supposed to be owing to the patient walking about too much; she was directed to keep quiet, and the parts speedily reassumed their favourable appearance.

Case 2.—E. Clark, ætat. 18, of dark complexion, admitted August 3, under the care of Mr. Travers.

She stated that she had been living as a prostitute about 7 months, and had resided at Swan Alley five weeks, where she was principally visited by foreign sailors.

She was admitted with a sore on the lower part of the left labium, extending along the perineum, having precisely the same characters as the first case, described above. The ulcer was of five weeks standing, and had increased very much within the last fortnight. She had purulent discharge from the vagina for some time previous to the appearance of the sores. She had taken some mercurial pills.

A similar plan of treatment was directed in this case, to that of the first, and it was followed with the same favourable result. The turpentine dressing occasioned a considerable degree of pain in the ulcerated parts; but conjoined with the yeast poultices and poppy fomentations, the sore, under its use, soon lost its *sloughy* (not *sloughing*) disposition, and healthy granulations appeared. The mixture of æther, and the opiate pills were at the same time given. A mutton chop was allowed daily.

Our report of this case on the 28th of August is:—sores nearly healed; the patient much improved in health and strength, but still keeps her bed, by direction of Mr. Travers. She now takes the sulphate of quinine, and has omitted the former medicines: the poultices are discontinued, and the turpentine dressing alone applied to the sore.

ST. BARTHOLOMEW'S HOSPITAL.

The foul wards of the Hospital have contained several cases of severe disease during the summer. We select two or three, which illustrate some important points of practice, and transcribe them literally from Mr. Lawrence's case-book, which is in one of the wards for the inspection of the students.

Thomas Wright, ætat. 35. Phimosis, with inflammation and swelling of the prepuce, and sloughing chancre. He has, during the last year and a half, been occasionally subject to small superficial sores on the inside of the foreskin, near the corona glandis. Once, about two years ago, he had a small but deep ulcer in front of the glans, which, together with the other sores, healed by tepid bathing and general attention to cleanliness.—None of these sores were followed by buboes, or any constitutional disturbance. Six days prior to his admission he awoke in the night with a sensation of burning about the prepuce, and, upon examination of the part, discovered that a slight sore, which had existed upon the left side of the corona glandis, had assumed a foul aspect: it should be observed, that he had drank freely the day before of porter; in general he has lived abstemiously. The slough rapidly extended round the left side of the glans to the frænum; the prepuce became painful and swollen, and its orifice so contracted, that after two

days he could not draw it back. He took mercury once in his life, when he was about 19 or 20, for a small ulcer on the glans, after connexion; his mouth was affected, and continued sore nearly a month.

July 6. The prepuce is red and swelled, and the whole of the penis very painful. From the orifice of the prepuce, which is in the state of phimosis, a thin and very fœtid discharge issues in great abundance. The pulse is frequent, but not strong; the tongue covered to its very edges with a thick white coat; he has not rested at night; he is hot, thirsty, and has headache. The foreskin having been slit up in front, to its whole extent, there was discovered a large sloughing sore, extending from the upper and back part of the glans round to the left side of the frænum, inclusive; indeed, in the situation of this fold, which had been destroyed, there was a sloughing excavation between the swelled integuments and the pubes. Venesection, to 12 oz.; cal., grs. iv.; cum. jalap., grs. xii., statim. mist. Ammon. acet. ʒiss. 6tis horis. The penis to be frequently fomented, and covered with a bread and water poultice.

7. Much relieved by the loss of blood, which was sizy; passed a comfortable night; the tongue much cleaner; the pain of the part much lessened.

8. The slough has separated; more than one-third of the glans is destroyed, and a foul ulceration extends very deeply between the penis and skin. The edges of the ulcers, formed by the glans and integuments, are quite clean and beginning to granulate. The centre, which extends very deeply into the body of the penis, presents a large, tough, white slough of the corpus cavernosum. In three or four days the last-mentioned slough had become so far loosened that it was removed, leaving a deep excavation in the body of the penis under the glans; the latter is now connected to the corpus cavernosum by only one-sixth of its basis. Six ounces of port wine daily; infus. cinch. with dilute sulph. acid.

17. The sore has been healing most favourably. Yesterday the penis, at the basis of the ulcer, swelled and became hard, the skin being slightly red and hot, and the part rather painful. The tongue is furred, the pulse accelerated, the appetite deficient, and he rested badly. The wine and bark to be discontinued; twelve leeches to the penis, and bread poultice; senna mixture, and afterwards the saline mixture.

18. The redness and pain of the part are lessened; he passed a good night, and the feverish symptoms have disappeared.

28. The swelling and induration of the penis have continued and extended towards the pubes; leeches have been again applied four times, always with relief of pain and redness. The part is poulticed, and the senna mixture taken occasionally.

Aug. 13. Matter formed and made its way out at the ulcer; the opening was insufficient, and the director introduced at this place went to the pubes; the integuments were divided in the full extent of the excavation, and the whole surface is now cicatrizing very rapidly.

20. The patient is nearly well, the sore almost cicatrized; the health and strength completely restored.

John Dunn, ætat. 38. Mortification of the penis. About five weeks prior to his admission he had gonorrhœa preputii, and in a short time afterward a small pimple made its appearance upon the glans, which gradually enlarged and became a spreading sore, and a second, corresponding to this, formed on the internal surface of the prepuce, which swelled so much as to produce phimosis. In a week afterwards the skin of the penis began to look black, and at last to rot away. No circumstances could be detected, in the nature of the original affection, in the treatment, local or general, or in the constitution of the patient, to account for the terrible destruction which had occurred in this case. No violent local remedies had been applied; mercury had not been used to excess; nor had the patient been guilty of intemperance.

June 29. One half of the penis, including the entire glans, is a black slough; the substance of the prepuce is partially detached, and hangs in black shreds, exposing the black glans and penis. The mortification seems to have stopped, but the separation has not decidedly commenced; the sound portion of the penis is rather red and swelled; the pulse is regular and rather slow; the tongue tolerably clean; the gums affected with mercury, which he has taken in the form of pills for three weeks. There is considerable debility; the part is painful at night, so as to prevent rest, but he does not suffer during the day. The part to be fomented and poulticed, and the bowels to be opened with calomel and jalap. Sumat ext. conii., grs. v. ter in die et pil. saponis c.; opio, grs. v.; hora somni si opus sit. Mist. Ammon. acetat. ʒiss. 6ta quaq. horâ.

30. Passed a very good night, complaining of no pain. Pulse quiet; bowels open. The slough on the dorsum of the penis begins to separate.

July 2. Considerable progress has been

made in the separation of the slough, and the edge of the sound part is clear and healthy; the redness and swelling of the penis are gone; he suffers no pain except when the poultice begins to get dry.—Pulse feeble. Let the narcotics be continued, and the saline mixture omitted. Six ounces of Port wine daily.

3. Much improved; he takes the opium only at night; the wine is increased to eight ounces.

22. The remaining portion of the penis has gone on improving daily up to this period; he complains of no pain whatever, but feels very weak, which is attributable in some measure to a diarrhœa, which has been upon him, but has now stopped. He has been taking, in addition to his ʒviij. of Port wine, the infus. cinchon. comp.

27. The chalk mixture, with opium, has been substituted in place of the bark, on account of diarrhœa. The bowels are better to-day. Pulse feeble; appetite deficient; tongue rather furred; great debility. Decoct. cinchon. ʒiss. cum tinct. ejusd. ʒj. ter in die.; twelve ounces of wine daily. The penis is nearly healed.

Aug. 13. The bowels were disturbed by the bark, which was therefore discontinued. Of various medicines tried for him, the combination of hydrarg. c. creta, with Dover's powder, in equal parts, five grs. of the mixture to be taken three times a day, was the most beneficial. At present he is greatly emaciated, very feeble, almost without appetite; the purging, however, has ceased; the tongue is cleaner, and he feels rather better. He has taken a pint of milk, with ʒvi. of lime water for the last two days. The penis is perfectly cicatrized.

26. The disorder of the bowels is stopped, and the strength is returning fast. He will soon leave the Hospital.

John Hogin, ætat. 21, June 26, 1826. Inflammation of the penis, with mortification of the prepuce. Three weeks ago a sore formed on the glans penis, in a few days after a suspicious connexion: he took some opening pills, and pursued his ordinary avocations. Nine days after the prepuce began to inflame, and swelled so much that he could not retract it; it became extremely painful, the inflammation and swelling increasing to the time of his admission. He had observed no discharge from the urethra.

28. The integuments of the entire penis, and the prepuce more particularly, are greatly swollen, bright red, and acutely painful. The prepuce has mortified at its middle, where there is a portion about equal to half a crown completely black: its separation from the sound parts has not commenced. A copious, foul, and offensive discharge issues from the contracted orifice of the prepuce. The severe pain of this acute inflammation has prevented sleep; the tongue is white, the pulse nearly 150, and the constitutional disturbance altogether very considerable. Sixteen ounces of blood were immediately taken from the arm, and with great relief; the appearance of the blood was natural. The prepuce was slit up in its whole extent through the middle of the mortified part, which was loose in texture, its interstices being filled with a stinking sanies. A small artery bled freely; the bleeding from it was encouraged. The entire internal surface of the prepuce, and five-sixths of the glans were ulcerated, the ulceration being ragged, irregular, and of a dirty white colour. The natural appearance of the glans was so completely lost, that it would not have been recognised but for its situation. The penis to be frequently fomented, and covered in the intervals with bread and water poultice. A dose of calomel and jalap, to be followed by a dose of the senna mixture; saline mixture, with antimony, every six hours; milk diet.

29. Great improvement in the local and general symptoms; the part is easy, and the patient passed a quiet night, but without much sleep. Pulse 112; tongue white; venesection to 12 oz.; medicines continued.

30. The blood drawn yesterday is sizy, and the crassa-mentum firm. Bowels not open for the last 24 hours; pulse 110, rather full and strong; venesection repeated; an active purgative.

July 2. The swelling of the penis has subsided; the ulceration of the glans, and that of the prepuce, with the cut edges of the latter, have assumed the healthiest appearance. Bread poultice continued; tongue clean; pulse quiet; countenance natural; good appetite. Medicines discontinued; a dose of senna mixture occasionally.

12. The healing process is completed. The patient left the Hospital two or three days afterwards.

CASE OF GLEET, WITH SLOUGHING OF THE SCROTUM, AND SWELLING AND ULCERATION OF THE LEFT TESTICLE.

John S——, a porter, 23 years of age, stated, on his admission into this hospital on the 4th of May, that he contracted a gonorrhœa about Christmas; that shortly afterwards his testicles became swollen, and he suffered great pain in consequence.

It does not appear that he has availed himself of any efficient advice; he has taken, however, a little aperient medicine, and has worn a suspensory bandage.

About three weeks since, the scrotum became *chafed*, (as he supposed from the friction of his trowsers,) and the sore thus occasioned degenerated into its present state.

There is at present a foul and unhealthy ulcer of the scrotum, about the size of a crown piece, at its most depending part, through which the testicle projects in a very uneven and ragged manner; the whole of the exposed surface very unhealthy. The whole gland is also considerably swollen, and somewhat hard. The right gland is of a natural size, and free from disease. Mr. Lawrence observed to day, that this disease was by no means malignant, since the chord was unaffected, and the pain comparatively slight. The constitution is free from any disturbance. The discharge from the urethra is at present rather abundant.

May 12. Leeches to be applied to the testicle, and a bread and water poultice afterwards. To take a dose of calomel and jalap (4 grains, and 12,) immediately.

6. The leeches have had effect of lessening the swelling and tension of the gland, but the appearance of the sore remains unaltered.

12. The sloughing of the scrotum continues, and the diseased gland projects rather more than it did. Continue the poultices.

17. Mr. Lawrence, to-day by means of a double-edged pocket scalpel, transfixed the protruded portion of gland, and detached it. The first part of the operation was productive of no pain, and the latter only of little. On examining the excised portion of gland, an adventitious caseous substance appeared deposited in layers between the original structure of the organ; and here and there the *tubuli seminiferi* were distinctly recognizable.

June 2. Poultices have been regularly applied; bowels not relieved, since the 31st. To take the following powder:

Calomel, 2 *grains*;
Powdered jalap, 12 *grains*. Mix.

Linseed meal poultices applied to the sore.

12. Since our last report, there has been no alteration in the character of the sore until within the last two days, since which time the surface has assumed a much more healthy and granulating appearance. The patient's health is much improved, and there is little doubt that he will now do well.

WESTMINSTER HOSPITAL.

AMPUTATION OF THE ARM IN CONSEQUENCE OF A PUNCTURE OF THE RADIAL ARTERY IN VENESECTION.

Some account of this case has already been given in Nos. 154, 5, but as it furnishes some useful practical information, we shall again place the facts in connexion.

A man, about 35 years of age, applied to a druggist to be bled, on the 30th of July last, who, in the attempt, punctured the radial artery. Hæmorrhage, more or less, took place two or three times every day, as the wound was only secured in a careless manner with a lint compress, and on the 4th of August he came to the Westminster Hospital, and was received under the care of Mr. White, who, on being sent for by the House Surgeon in the night, on account of another slight hæmorrhage, cut down upon the tumour and secured the radial artery above and below the puncture. Six days after the radial artery had been thus secured, the hæmorrhage returned, as if from a single vessel, the blood issuing per saltum from a certain point of the wound; this vessel was sought for and secured. The edges of the wound became unhealthy, and the ulceration increased to the extent of a few inches, exposing the outer edge of the pronator radii teres, and a part of the tendon of the biceps. In *ten days* after the performance of this second operation, a profuse hæmorrhage suddenly burst forth from the many points on the surface of the wound, and before it was stopped, about thirty ounces of blood were lost. The House Surgeon compressed the brachial artery, and thus stayed the bleeding until the arrival of Mr. Lynn, jun., the officiating surgeon for his uncle, Mr. Lynn, senior, who tied that vessel about two inches above the upper edge of the old wound. This was done on Tuesday the 22d of August.

On the following day the surgeons, namely, Sir Anthony Carlisle, principal, Mr. Guthrie and Mr. Lynn, junior, assistants, on making their visit, saw the patient. A consultation was now held to determine what could be done in case the hæmorrhage returned. Sir Anthony Carlisle being the only chief surgeon present, delivered his judgment to the following effect:—"Should the hæmorrhage return, amputation must not be thought of; for as he has already lost so much blood, he will

in all probability die upon the table, if amputation be attempted." The wound was at this time in a sloughy state, discharging a fœtid sanious matter, the forearm much swollen, the countenance almost blanched, and the pulse a mere thread. It was decided that no amputation should be performed, but that the brachial artery should be again tied higher up, or the axillary artery be secured, if pressure on the upper part of the brachial did not stop the hæmorrhage.

On the next day, only the second after the brachial artery had been secured, the bleeding again broke out from the wound; the House Surgeon happened to be going through the wards, and on the alarm being given, arrived just in time to save the man's life, by compressing the axillary artery. Mr. White, who was not present at the consultation on the preceding day, was sent for between 11 and 12 o'clock, and finding that the blood flowed freely from the several vessels on the wound's surface, he decided on amputating the limb just above the place where the brachial artery had been secured by Mr. Lynn, junior. The amputation was speedily performed, and the persons present were surprised to see a large arterial trunk on the back part of the arm, equal in size to the brachial. Several muscular branches of an unusually large size, required to be tied. Since the operation, the strength of the patient has been carefully supported, and he is now going on well. The arm was afterwards injected, and carefully dissected by Mr. Alcock: it was found that the profunda superior was unusually large; its two branches, the profundo-radial, and profundo-ulnar were twice their usual size; affording an easy explanation of the cause of the repeated hæmorrhage, viz. the great supply of blood sent by these vessels into the anastomosing branches round the condyles.

Remarks.—As all cases reported should be selected with some reference to the *cui bono*, we have selected this case to show the result of *bad treatment*. The radial artery was punctured, and the man has lost his arm. No doubt Mr. White did what he deemed the best for the patient, by cutting down upon the varicose aneurism, and tying the artery above and below the puncture; but that is not the best mode of treating such an accident. A *graduated* compress should have been placed upon the tumour until the cicatrization of the wound of the integuments had acquired sufficient firmness to resist the pressure of the impetus of the arterial blood. The tumour would have reached a certain magnitude, and then have remained stationary. The irregular distribution of the vessels would have assisted, rather than have retarded the cure, because the amount of circulating force was thereby divided, consequently a less resistance was required. *Pressure*, steady and accurately applied pressure, should have been first tried; on this point most men of experience are agreed. Should it be found afterwards necessary, the brachial artery may be tied, and if its branches be given off in the usual manner or not, the operation must succeed.

Scarpa*, Dr. William Hunter, Pott, and Garneri, mention cases of the aneurismal varix, which remained stationary for fourteen, twenty, and thirty-five years. Compression, therefore, should always be first employed.

Mr. White acted very properly in amputating the limb under the existing circumstances, but no such expedient would have been necessary, if he had not at first made the *faux pas* of cutting into the aneurismal tumour. What could Sir Anthony Carlisle have meant by his fiddle-de-dee observations? What! tie the arterial trunk of a limb on the verge of mortification, with three arteries already secured? Fie, fie, Sir Anthony, you, as one of the inquisitors of Lincoln's-inn College, ought to preach a better doctrine.

The amputated limb was very well dissected, but all Mr. Alcock's labour was thrown away by the rude officiousness of Mr. Guthrie, who, although only an assistant, gives himself as many airs as if he wore his red coat, and were dictating the law to his subordinate officers. We say the pupils were deprived of all the benefit of the dissection, by his gratuitous interference in cutting away the vessels at their bifurcation, without even asking permission of Mr. White; a courtesy which he should have observed, being only an assistant. Mr. Guthrie must give himself no military tantrums in a *civil* Hospital. Verbum sat!

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* See his tract entitled *Memoria sulla Legatura delle principali Arterie, con una appendice all'opera sull'Aneurisma*, Pavia, 1817, which contains much valuable matter on the subject.